

Graduate Students and Postdoctorates in Science and Engineering

Fall 1998

Detailed Statistical Tables

Joan Burrelli, Project Officer

Division of Science Resources Studies
Directorate for Social, Behavioral, and Economic Sciences

National Science Foundation



May 2000

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GENERAL NOTES

Data presented in these tables are derived from the fall 1998 National Science Foundation/National Institutes of Health (NSF/NIH) Survey of Graduate Students and Postdoctorates in Science and Engineering. Unless otherwise specified, the published data represent estimates of total enrollment in science and engineering (S&E) programs in approximately 11,718 graduate departments at 601 institutions in the United States and outlying areas.

NSF has collected data on graduate enrollment and postdoctoral employment since 1966. Note, however, that these data were collected on a limited or sample basis from 1984 through 1987 (see Technical Notes for further information). Beginning in 1988, all eligible institutions were included in the survey.

In 1992, the citizenship categories requested were modified to conform to those used in other surveys conducted by NSF and the National Center for Education Statistics, among others. Previously, permanent residents (those who held green cards but had not yet been granted U.S. citizenship) were included in the "Foreign" category; after 1992, these individuals were included in the "U.S.

citizens" total and reported according to racial/ethnic background.

For these reasons, and because institutions may revise their data for earlier years, only the latest trend data should be used in historical analyses.

Tables showing data on source or mechanism of support refer only to primary (that is, largest) source or mechanism of support.

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TECHNICAL NOTES¹

SURVEY UNIVERSE

The data collected in the fall 1998 Survey of Graduate Students and Postdoctorates in Science and Engineering represent national estimates of graduate enrollment and postdoctoral employment at the beginning of academic year 1998–99 in all academic institutions in the United States that granted doctorate or master’s degrees in any science or engineering field. Included are data for all branch campuses, affiliated research centers, and separately organized components such as medical or dental schools, schools of nursing, public health, etc. The survey universe consisted of 722 reporting units at 601 graduate institutions. Included were 249 master’s-granting institutions and 473 reporting units associated with 352 doctorate-granting institutions.

The National Science Foundation (NSF) has collected data on graduate science and engineering (S&E) enrollment and postdoctoral appointees since 1966. From fall 1966 through fall 1971, data from a limited number of doctorate-granting institutions were collected through the NSF Graduate Traineeship Program, which requested data only on those S&E fields supported by NSF. Beginning with the fall 1972 survey, this data collection effort was assigned to NSF’s Universities and Nonprofit Institutions Studies Group and was gradually expanded from 1972–75 to include additional S&E fields as well as all institutions known to have programs leading to a master’s or doctoral degree. Due to this expansion, data for 1974 and earlier years are not strictly comparable with 1975 and later data. Technical table 1 shows the number of institutions, reporting units, and departments at each level included in the data, as well as the total enrollment reported for each year between 1966 and 1998. No attempt has been made to inflate the data for 1966–74 to reflect universe totals.

Beginning with the 1984–85 academic year, master’s-granting institutions were surveyed on a sample basis. From 1984–87 the survey design was a stratified random sample, with all doctorate-granting institutions, all master’s-granting historically black colleges and universities, and all land-grant institutions included in the certainty stratum. The remaining master’s-granting institutions were divided into two sample strata on the basis of

enrollment size. Data for sampled institutions for the years 1984–87 were reestimated in 1988 on the basis of 1983 and 1988 data. During the 1989 survey cycle, S&E field definitions were reviewed and some departments were deleted. Data for 1975–88 were adjusted to conform to the revised definitions.

The fall 1988 survey included the entire survey population for the first time since 1983–84. Since 1988, any institutions starting up S&E master’s or doctoral programs have been added to the survey universe, and any that have closed all their S&E graduate programs have been deleted. (See Survey Methodology, below.)

Technical tables 2 and 3 present data on departmental coverage by S&E field for doctorate- and master’s-granting institutions for the last 8 years surveyed.

SURVEY INSTRUMENTS

The survey questionnaire on which data were reported in fall 1998 was identical to that used in fall 1997. In addition to the questionnaire proper, each survey package also included the following:

- an enclosure detailing mailing package contents;
- a flyer explaining NSF’s academic S&E surveys;
- cover letter to survey coordinators at graduate schools or at medical schools;
- cover letter to departmental respondents;
- a computer-generated List of Departments or Programs (NSF Form 811) specific to each institution surveyed and based on the departments known to exist in the previous survey cycle;
- a “crosswalk” showing National Center for Education Statistics instructional program codes corresponding to each S&E field as defined by NSF;
- a “How to Avoid Common Survey Errors” sheet with guidelines for avoiding the most common mistakes made in the graduate student survey;

¹See <http://www.nsf.gov/sbe/srs/sgss/start.htm> for a more detailed discussion of the methodology used in this survey.

- a postcard for respondent use acknowledging receipt of the survey and indicating any changes in coordinator name, address, telephone number, or e-mail address;
- a “Web-Based Data Reporting System” announcement introducing and explaining the new Web system, which allows coordinators and departments to enter data directly into the system through the Internet;
- an “ID and Password” flyer informing coordinators of their IDs and passwords so they can access the new NSF-NIH Graduate Student Survey Web-Based Data Reporting System; and
- an “Accessing NSF Data on the Internet” sheet encouraging coordinators to view last year’s data on the Web via the NSF Science Resources Studies home page.

SURVEY METHODOLOGY

The survey packages were mailed out by November 30, 1998. This was the first year in which schools had the option of reporting data using the new NSF-NIH Graduate Student Survey Web-Based Data Reporting System. Two hundred and sixteen schools chose to report data using the new Web system. The final survey universe consisted of 722 reporting units at 601 institutions.

In addition to the verification information cited above, the acknowledgment postcard also requested that institutional coordinators indicate how the data were collected, whether the data were maintained centrally or collected from individual departments, and whether they were derived from a computerized database or hand tabulated. Of the 722 reporting units surveyed, 98.9 percent have provided this information over the past 10 years. The majority of schools report a combination of sources for their data. Over the years, the use of computerized systems has shown a gradual but small increase, while the use of hand tabulation has slowly decreased.

Institutional coordinators were asked to review the departmental listing provided in the survey packet and to indicate any changes in their departmental structure such as departments newly formed, phased out, split, or merged; they were also asked to check off any departments that had neither graduate students nor

postdoctorates and for which survey questionnaires would therefore not be submitted. The revised Form 811s were returned to NSF’s data processing contractor for use as a checklist in tracking departmental responses.

A survey questionnaire was completed for each department either centrally or at the department level and was returned to the data processing contractor for data entry, editing, and tabulation. Arithmetic errors, inconsistencies between items, and sharp year-to-year fluctuations were referred to the institutional coordinators for correction or clarification.

RESPONSE RATE

Of the 722 reporting units included in the fall 1998 survey, 721—or 99.9 percent—were able to provide at least partial data, distributed as follows:

At the departmental level, 11,528 departments responded, or 98.4 percent of the 11,718 departments surveyed. Of these, 9,822 departments, or 83.8 percent of the total, provided complete responses. A total of 190 departments, or 1.6 percent of the departmental total, required complete imputation; 1,706, or 14.6 percent, had one or more data cells imputed. Technical table 4 presents the department response rates for earlier years for comparison.

Missing data for partially nonrespondent departments were imputed using the departments’ previous year’s data, where available, or data from peer institutions in cases where data had not been reported the previous year. Data for nonrespondent departments (those that did not provide any data) were imputed using data from the previous year, where available. The number of departments in doctorate- and master’s-granting institutions that required total or partial imputation, and the numbers and proportions of full- and part-time graduate students and postdoctorates imputed, are shown in technical tables 5 and 6. Imputation rates by survey data item are provided in technical table 7.

CHANGES IN DATA ITEMS

Although NSF has attempted to maintain consistent trend data, some modifications in the survey questionnaire have been made to respond to changing issues over the past 25 years. As a result, some data items are not available for all institutions in all years.

Major changes in the data collected are as follows:

- From 1975-77, data for master's-granting institutions were collected on a short form (i.e., an abbreviated form of the survey) that did not collect data on sex or citizenship of graduate students, nor any data on postdoctoral appointees. In 1978, a similar questionnaire was sent to doctorate-granting institutions; master's-granting institutions were not surveyed that year. This 1978 questionnaire did not collect data on mechanisms of support for full-time students. All mechanisms of support data for that year were combined on one line and appear as "other types of support" in any data tables. The 1978 figures shown in the tables for master's-granting institutions represent estimates based on 1977 and 1979 data. Beginning in 1979, the full-scale survey form was sent to both doctorate- and master's-granting institutions.
- Distribution by sex was originally requested only for full-time graduate students at doctorate-granting institutions. Beginning in 1976, master's-granting institutions were also asked to provide data on all graduate students by sex; in 1977, similar data were requested for all graduate students in all institutions. The short form used in 1978 did not request any information on sex; figures in the tables represent estimates based on 1977 and 1979 data.
- Citizenship data were collected only for graduate students enrolled full time in doctorate-granting institutions through 1977. No citizenship data were requested on the short form used for master's-granting institutions in 1975-77 and for doctorate-granting institutions in 1978. Data on citizenship of all full-time graduate students are available beginning in 1979 and on those enrolled part time since 1983.
- Racial/ethnic data were first requested in 1979 and became a standard item on the questionnaire in 1980.
- The support mechanisms of "fellowships and traineeships" were combined on one line until 1979, when separate data on the two mechanisms were first collected.
- "Other nonfaculty research staff with doctorates" were combined with postdoctoral appointees until 1979.
- Separate data on students receiving their primary support from the U.S. Department of Agriculture were first requested in 1985.
- Racial/ethnic data by sex were first requested in 1993 and became a standard item on the questionnaire in 1994.
- Separate data on students receiving their primary support from the National Aeronautics and Space Administration were first requested in 1996.
- A new Web-based reporting option was incorporated into the 1998 graduate student survey. Coordinators and departmental respondents both had the option of submitting their data through the World Wide Web. Using this new Web option, schools could avoid manually filling out the paper survey, and could obtain immediate feedback on their responses. This helped coordinators and departmental respondents ensure that their data was accurate and complete. Using this option also enabled respondents to upload their own data files, speeding up the reporting process.

DATA REVISIONS

During the fall 1988 survey cycle, the criteria for including departments in the survey universe were tightened, and all departments surveyed were reviewed. Those departments not primarily oriented toward granting research degrees were no longer considered to meet the definition of science and engineering. As a result of this review, it was determined that a number of departments—primarily those in the field of "Social sciences, not elsewhere classified"—were engaged in training primarily teachers, practitioners, administrators, or managers rather than researchers; these departments were deleted from the database. This process was continued during the 1989–97 survey cycles and expanded to ensure trend consistency for the entire 1975–97 period. As a result, total enrollments and social science enrollments for all years were reduced. The net effect of adjustments over the years is shown in technical table 8.

During the same period, the survey methodology changed so that the institution's highest S&E degree in the current year would apply to all previous years in which that institution was surveyed. Since a number of master's-granting institutions have become doctorate-granting institutions over the years, the result has been a smaller decrease in enrollment at doctorate-granting institutions than at master's-granting institutions. For the years 1975–76 and 1991–92, there was an increase in enrollment at doctorate-granting institutions after subsequent year modifications.

The definition of medical schools was revised during the fall 1992 survey cycle to include only those institutional components that are members of the Association of American Medical Colleges. Tables generated after the fall 1992 survey differ from their counterparts in earlier years in that they exclude schools of nursing, public health, dentistry, veterinary medicine, and other health-related disciplines; they should not be compared with tables from earlier years.

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Technical Table 1. The NSF data collection series: 1966-1998

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Year	Number of institutions surveyed	Number of reporting units surveyed	Number of departments surveyed			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full-time	Part-time
A. Graduate Traineeship Program								
1966	204	204	2,866	441	2,425	169,303	124,255	45,048
1967	209	209	3,014	434	2,580	179,622	133,972	45,650
1968	219	219	3,190	454	2,736	184,759	140,714	44,045
1969	224	224	3,354	460	2,894	196,341	147,515	48,826
1970	227	227	3,544	473	3,071	201,918	153,250	48,668
1971 ¹	224	249	3,397	407	2,990	214,680	164,764	49,916
B. Survey of Graduate Students and Postdoctorates in Science and Engineering ²								
Doctorate institutions:								
1972	260	328	4,593	780	3,813	210,895	161,329	49,566
1973	259	336	6,538	859	5,679	214,459	161,582	52,877
1974	280	370	7,485	1,398	6,087	260,312	190,665	69,647
1975	330	427	7,920	1,740	6,180	295,718	207,494	88,224
1976	339	437	8,015	1,794	6,221	299,916	211,288	88,628
1977	340	442	8,230	1,914	6,316	307,763	213,343	94,420
1978	318	426	8,193	1,803	6,390	300,854	209,198	91,656
1979	356	471	8,469	1,979	6,490	317,086	217,546	99,540
1980	355	470	8,572	2,025	6,547	326,608	223,720	102,888
1981	353	466	8,495	2,020	6,475	333,270	227,523	105,747
1982	350	464	8,350	2,004	6,346	339,776	230,599	109,177
1983	349	463	8,225	1,967	6,258	346,591	236,520	110,071
1984	336	454	8,222	1,931	6,291	348,895	237,542	111,353
1985	336	449	8,334	1,970	6,364	358,255	241,149	117,106
1986	336	451	8,408	1,982	6,426	368,840	249,850	118,990
1987	340	457	8,521	1,984	6,537	374,375	254,415	119,960
1988	354	472	8,776	2,077	6,699	380,160	259,897	120,263
1989	355	473	8,898	2,090	6,808	387,632	267,094	120,538
1990	354	472	9,039	2,133	6,906	401,323	275,768	125,555
1991	354	472	9,232	2,152	7,080	416,646	288,250	128,396
1992	354	472	9,470	2,200	7,270	435,696	302,226	133,470
1993	354	472	9,660	2,210	7,450	443,757	308,195	135,562
1994	353	471	9,869	2,265	7,604	444,093	309,817	134,276
1995	352	470	10,045	2,317	7,728	438,306	306,125	132,181
1996	353	471	10,059	2,366	7,693	432,812	304,720	128,092
1997	352	474	10,032	2,433	7,599	426,032	302,338	123,694
1998	352	473	10,117	2,446	7,671	422,834	301,544	121,290

See explanatory information, if any, and SOURCE at end of table.

Technical Table 1. The NSF data collection series: 1966-1998

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Year	Number of institutions surveyed	Number of reporting units surveyed	Number of departments surveyed			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full-time	Part-time
Master's institutions:								
1975 ³	256	256	1,085	1,085	N/A	32,832	12,193	20,639
1976	257	257	1,097	1,097	N/A	33,839	12,158	21,681
1977	263	263	1,164	1,164	N/A	37,653	13,433	24,220
1978 ⁴	282	282	1,317	1,317	N/A	39,058	13,832	25,226
1979	275	275	1,219	1,219	N/A	40,523	14,244	26,279
1980	273	273	1,228	1,228	N/A	40,503	14,728	25,775
1981	271	271	1,235	1,235	N/A	41,888	14,553	27,335
1982	261	261	1,236	1,236	N/A	42,558	14,197	28,361
1983	261	261	1,244	1,244	N/A	43,883	15,535	28,348
1984 ⁵	76	76	570	570	N/A	45,775	16,380	29,395
1985 ⁵	76	76	578	578	N/A	45,766	16,138	29,628
1986 ⁵	76	76	579	579	N/A	46,702	16,332	30,370
1987 ⁵	76	76	585	585	N/A	47,137	16,651	30,486
1988	252	252	1,242	1,242	N/A	44,453	15,297	29,156
1989	254	254	1,292	1,292	N/A	46,935	15,625	31,310
1990	256	256	1,322	1,322	N/A	50,855	17,062	33,793
1991	255	255	1,369	1,369	N/A	54,616	18,790	35,826
1992	254	254	1,408	1,408	N/A	57,936	20,383	37,553
1993	252	252	1,452	1,452	N/A	60,692	21,484	39,208
1994	252	252	1,506	1,506	N/A	60,449	22,312	38,137
1995	251	251	1,532	1,532	N/A	61,426	23,023	38,403
1996	250	250	1,532	1,532	N/A	61,407	23,733	37,674
1997	249	249	1,573	1,573	N/A	61,339	24,711	36,628
1998	249	249	1,601	1,601	N/A	62,920	26,065	36,855

1 The 1972 survey also collected selected data for 1971.

2 The name of the survey was changed in 1981 to specify the inclusion of engineering.

3 The 1976 survey also collected 1975 data from master's-granting institutions.

4 Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

5 Master's-granting institutions were surveyed on a sample basis from 1984 through 1987.

KEY: N/A = Not applicable

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 2. Number of science, engineering, and health departments
in doctorate-granting institutions, by detailed field: 1990-1998**

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Field	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	9,039	9,232	9,470	9,660	9,869	10,045	10,059	10,032	10,117
Total, science and engineering fields	6,523	6,675	6,830	6,922	7,061	7,181	7,175	7,191	7,257
Sciences, total	5,284	5,398	5,516	5,586	5,689	5,783	5,763	5,758	5,802
Physical sciences, total	550	558	563	566	567	576	570	572	576
Astronomy	33	33	33	34	34	35	35	35	36
Chemistry	265	267	268	268	266	267	267	268	267
Physics	238	245	247	249	252	254	250	253	255
Physical sciences, n.e.c.	14	13	15	15	15	20	18	16	18
Earth, atmos., & ocean sci., total	309	321	323	327	336	350	347	349	358
Atmospheric sciences	28	29	29	31	32	33	33	32	33
Geosciences	194	202	203	203	207	211	211	208	207
Oceanography	42	45	45	45	46	50	48	49	54
Earth, atmos., & ocean sci., n.e.c.	45	45	46	48	51	56	55	60	64
Mathematical sciences, total	362	368	375	381	388	393	393	391	388
Mathematics & applied mathematics	295	299	300	304	308	312	311	310	308
Statistics	67	69	75	77	80	81	82	81	80
Computer sciences	235	242	253	256	263	274	281	284	291
Agricultural sciences	295	303	315	312	318	324	318	328	333
Biological sciences, total	1,832	1,874	1,913	1,958	1,985	2,000	1,980	1,952	1,972
Anatomy	107	106	105	104	104	101	100	96	93
Biochemistry	183	187	190	190	191	192	191	191	191
Biology	237	235	237	236	235	235	237	244	248
Biometry/epidemiology	51	56	61	69	71	72	72	71	72
Biophysics	31	33	33	33	33	33	34	31	31
Botany	104	104	102	103	104	101	98	95	94
Cell biology	92	96	104	110	118	121	121	122	135
Ecology	26	27	28	27	31	31	30	30	31
Entomology/parasitology	48	49	48	49	49	48	48	48	49
Genetics	67	72	76	79	82	84	83	82	82
Microbio., immunology, & virology	237	243	249	260	261	265	264	254	258
Nutrition	104	109	113	116	121	125	124	122	123
Pathology	143	147	145	143	143	144	139	138	136
Pharmacology	162	163	166	167	168	168	163	158	157
Physiology	145	146	146	146	144	146	144	138	133
Zoology	49	49	47	50	50	49	45	41	40
Biosciences, n.e.c.	46	52	63	76	80	85	87	91	99
Psychology, total	471	493	516	521	537	553	558	565	569
Psychology, general	171	170	168	165	167	167	163	167	171
Clinical psychology	102	107	112	115	117	124	128	129	128
Psychology, n.e.c.	198	216	236	241	253	262	267	269	270
Social sciences, total	1,230	1,239	1,258	1,265	1,295	1,313	1,316	1,317	1,315
Agricultural economics	52	52	53	52	53	54	54	54	54
Anthropology (cultural & social)	122	126	128	130	132	135	135	138	135
Economics (except agricultural)	195	197	201	201	204	203	197	197	195
Geography	96	97	99	99	100	101	99	100	101
History and philosophy of science	23	21	19	20	21	21	23	23	23
Linguistics	69	71	70	69	69	70	72	71	70
Political science	305	307	313	318	324	330	331	333	335
Sociology	174	175	175	176	177	178	175	172	172
Sociology/anthropology	30	28	28	25	26	25	25	25	24
Social sciences, n.e.c.	164	165	172	175	189	196	205	204	206
Engineering, total	1,239	1,277	1,314	1,336	1,372	1,398	1,412	1,433	1,455
Aerospace engineering	42	44	48	50	52	53	52	54	54
Agricultural engineering	41	41	41	40	38	38	38	38	38
Biomedical engineering	50	51	56	56	57	59	61	64	72
Chemical engineering	134	139	140	140	141	141	143	143	143
Civil engineering	187	194	200	202	212	218	227	231	234
Electrical engineering	200	208	216	218	225	230	234	238	242
Engineering science	35	36	37	39	41	39	36	36	38
Industrial eng./manufacturing eng.	127	134	138	147	156	159	162	163	163
Mechanical engineering	176	179	184	184	186	188	188	188	188
Metallurgical/materials eng.	89	96	101	101	104	106	107	112	113
Mining engineering	27	28	28	30	29	26	24	24	24
Nuclear engineering	26	26	25	25	26	26	24	23	24
Petroleum engineering	20	20	20	20	20	21	20	18	17
Engineering, n.e.c.	85	81	80	84	85	94	96	101	105

See explanatory information, if any, and SOURCE at end of table.

**Technical Table 2. Number of science, engineering, and health departments
in doctorate-granting institutions, by detailed field: 1991-1998**

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Field	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields	2,516	2,557	2,640	2,738	2,808	2,864	2,884	2,841	2,860
Medical fields, total	1,881	1,914	1,963	2,031	2,083	2,121	2,122	2,064	2,065
Anesthesiology	85	87	87	87	89	89	91	90	90
Cardiology	67	67	68	69	70	71	71	71	72
Oncology/cancer research	36	38	45	48	50	55	57	61	62
Endocrinology	74	74	73	72	74	74	74	71	71
Gastroenterology	65	65	66	68	71	71	71	68	68
Hematology	67	67	69	71	73	73	72	71	69
Neurology	130	135	137	145	153	154	151	154	156
Obstetrics and gynecology	92	92	95	96	96	96	95	90	91
Ophthalmology	80	80	80	81	81	81	79	79	79
Otorhinolaryngology	70	70	70	71	72	72	72	68	64
Pediatrics	107	107	109	111	115	116	118	111	112
Preventive medicine/community health	165	166	173	178	182	186	187	186	193
Psychiatry	101	100	101	103	107	107	104	101	100
Pulmonary disease	63	62	64	67	68	69	68	66	67
Radiology	128	131	135	137	139	141	138	134	129
Surgery	221	233	238	246	251	257	259	245	244
Clinical medicine, n.e.c.	330	340	353	381	392	409	415	398	398
Other health fields, total	635	643	677	707	725	743	762	777	795
Dental sciences	78	76	82	87	84	83	82	77	74
Nursing	123	126	132	136	140	146	144	149	153
Pharmaceutical sciences	83	84	89	91	92	94	97	95	96
Speech pathology/audiology	127	128	131	134	136	137	138	140	141
Veterinary sciences	41	41	42	44	45	46	46	47	48
Health related, n.e.c.	183	188	201	215	228	237	255	269	283

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resource Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 3. Number of science, engineering, and health departments
in master's-granting institutions, by detailed field: 1990-1998**

Page 1 of 2

Field	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	1,322	1,369	1,408	1,452	1,506	1,532	1,532	1,573	1,601
Total, science and engineering fields	1,171	1,205	1,233	1,270	1,313	1,325	1,313	1,342	1,362
Sciences, total	1,002	1,036	1,065	1,099	1,136	1,145	1,140	1,161	1,177
Physical sciences, total	117	120	118	123	124	121	117	121	121
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	79	79	79	79	79	75	73	74	73
Physics	30	31	30	32	32	32	31	32	32
Physical sciences, n.e.c.	8	10	9	12	13	14	13	15	16
Earth, atmos., & ocean sci., total	50	53	56	55	57	63	63	66	68
Atmospheric sciences	1	1	1	1	1	2	2	2	2
Geosciences	29	30	29	28	29	30	30	31	31
Oceanography	5	5	6	6	6	6	5	6	6
Earth, atmos., & ocean sci., n.e.c.	15	17	20	20	21	25	26	27	29
Mathematical sciences, total	95	98	101	107	108	108	107	111	110
Mathematics & applied mathematics	92	94	97	101	102	102	102	106	105
Statistics	3	4	4	6	6	6	5	5	5
Computer sciences	75	77	81	86	90	91	92	92	94
Agricultural sciences	24	25	26	26	32	33	31	30	31
Biological sciences, total	170	174	175	173	172	176	174	176	178
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	2	2	2	3	4	4	4	4	4
Biology	135	137	136	132	130	130	131	131	131
Biometry/epidemiology	0	1	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	3	3	3	2	2	2	2	2	2
Cell biology	0	0	0	1	1	2	1	3	3
Ecology	3	3	3	3	3	3	2	4	4
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	1	1	1	1	1	1	1	1	1
Microbio., immunology, & virology	2	2	2	2	2	2	2	3	2
Nutrition	9	9	11	12	13	15	15	13	15
Pathology	2	2	2	2	2	2	2	1	1
Pharmacology	1	1	1	1	0	0	0	0	1
Physiology	0	0	0	0	0	0	0	0	0
Zoology	2	3	3	2	2	2	2	2	2
Biosciences, n.e.c.	10	10	11	12	12	13	12	12	12
Psychology, total	202	208	220	231	239	236	239	247	248
Psychology, general	91	92	87	90	90	89	91	92	92
Clinical psychology	23	23	29	30	34	34	34	36	37
Psychology, n.e.c.	88	93	104	111	115	113	114	119	119
Social sciences, total	269	281	288	298	314	317	317	318	327
Agricultural economics	2	2	3	4	4	4	4	4	4
Anthropology (cultural & social)	11	11	11	11	11	11	11	12	12
Economics (except agricultural)	32	33	33	34	34	35	36	36	37
Geography	21	22	23	23	23	23	23	23	23
History and philosophy of science	0	0	0	0	0	0	0	0	3
Linguistics	4	6	7	7	7	7	7	7	7
Political science	99	101	103	104	111	113	113	111	111
Sociology	41	44	45	45	46	47	45	47	48
Sociology/anthropology	3	2	2	2	2	2	2	2	1
Social sciences, n.e.c.	56	60	61	68	76	75	76	76	81
Engineering, total	169	169	168	171	177	180	173	181	185
Aerospace engineering	3	2	2	2	4	4	3	3	3
Agricultural engineering	0	0	0	0	0	0	0	0	0
Biomedical engineering	3	3	3	4	4	4	3	4	4
Chemical engineering	6	7	7	7	7	8	8	8	8
Civil engineering	30	30	29	30	32	35	35	35	34
Electrical engineering	40	39	40	40	40	42	42	44	44
Engineering science	2	2	2	2	2	2	2	2	2
Industrial eng./manufacturing eng.	26	27	28	28	28	30	28	27	30
Mechanical engineering	24	23	22	23	23	24	22	23	25
Metallurgical/materials eng.	6	6	6	6	6	5	4	5	4
Mining engineering	4	4	4	4	4	2	2	2	2
Nuclear engineering	0	0	0	0	0	0	0	0	0
Petroleum engineering	1	1	1	1	1	1	1	1	1
Engineering, n.e.c.	24	25	24	24	26	23	23	27	28

See explanatory information, if any, and SOURCE at end of table.

**Technical Table 3. Number of science, engineering, and health departments
in master's-granting institutions, by detailed field: 1991-1998**

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Field	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields	151	164	175	182	193	207	219	231	239
Medical fields, total	7	9	11	13	16	17	15	16	18
Anesthesiology	1	1	2	3	3	3	2	3	3
Cardiology	0	0	0	0	0	0	0	0	0
Oncology/cancer research	0	0	0	0	0	0	0	0	0
Endocrinology	0	0	0	0	0	0	0	0	0
Gastroenterology	0	0	0	0	0	0	0	0	0
Hematology	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Obstetrics and gynecology	0	0	0	0	0	0	0	0	0
Ophthalmology	0	0	0	0	0	0	0	0	0
Otorhinolaryngology	0	0	0	0	0	0	0	0	0
Pediatrics	0	0	0	0	0	0	0	0	0
Preventive medicine/community health	4	6	6	7	8	8	8	8	9
Psychiatry	1	1	1	1	2	2	1	1	1
Pulmonary disease	0	0	0	0	0	0	0	0	0
Radiology	0	0	0	0	0	1	1	1	1
Surgery	0	0	0	0	0	0	0	0	0
Clinical medicine, n.e.c.	1	1	2	2	3	3	3	3	4
Other health fields, total	144	155	164	169	177	190	204	215	221
Dental sciences	0	0	0	0	0	0	0	0	0
Nursing	45	49	52	55	58	67	70	74	75
Pharmaceutical sciences	3	2	2	2	1	1	1	1	3
Speech pathology/audiology	50	55	56	55	56	58	62	64	66
Veterinary sciences	1	1	1	1	1	1	1	1	1
Health related, n.e.c.	45	48	53	56	61	63	70	75	76

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resource Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Technical Table 4. Original departmental response rates: 1975-1998

Year	Total	Complete response	Percent	Partial response	Percent	Non-response	Percent
1975	9,162	8,998	98.2	N/A	N/A	N/A	N/A
1976	9,275	9,148	98.6	N/A	N/A	N/A	N/A
1977	9,513	9,432	99.1	N/A	N/A	N/A	N/A
1978 ¹	8,242	8,077	98.0	N/A	N/A	N/A	N/A
1979	9,796	9,446	96.4	N/A	N/A	N/A	N/A
1980	9,930	9,593	96.6	N/A	N/A	N/A	N/A
1981	9,917	8,594	86.7	613	6.2	710	7.2
1982	9,776	8,104	82.9	744	7.6	928	9.5
1983	9,663	8,070	83.5	816	8.4	777	8.0
1984 ²	8,748	7,490	85.6	643	7.4	615	7.0
1985 ²	9,025	7,818	86.6	672	7.4	535	5.9
1986 ²	9,097	7,817	85.9	779	8.6	501	5.5
1987 ²	9,254	8,030	86.8	715	7.7	509	5.5
1988	10,295	8,812	85.6	970	9.4	513	5.0
1989	10,318	8,908	86.3	891	8.6	519	5.0
1990	10,483	8,884	84.7	1,053	10.0	546	5.2
1991	10,705	9,052	84.6	1,186	11.1	467	4.4
1992	10,936	9,066	82.9	1,538	14.1	332	3.0
1993	11,146	9,156	82.1	1,555	14.0	435	3.9
1994	11,411	8,863	77.7	2,109	18.5	439	3.8
1995	11,598	9,514	82.0	1,730	14.9	354	3.1
1996	11,592	9,851	85.0	1,522	13.1	219	1.9
1997	11,597	9,720	83.8	1,665	14.4	212	1.8
1998	11,718	9,822	83.8	1,706	14.6	190	1.6

¹ Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

² Master's-granting institutions were surveyed on a sample basis from 1984 through 1987.

NOTE: Departments providing partial responses are included in the complete response column prior to 1981 and reported separately beginning in 1981.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 5. Imputation for nonresponse in doctorate-granting institutions,
by field and enrollment status: 1996-1998**

Area of science and engineering	Number of graduate departments		Graduate enrollment								
			Total in survey			Number imputed			Imputation rate (percent)		
	In universe	Totally imputed	Full-time	Part-time	Postdoctorates	Full-time	Part-time	Postdoctorates	Full-time	Part-time	Postdoctorates
Fall 1998											
Total, all areas	10,117	170	301,544	121,290	39,494	4,671	3,026	759	1.5	2.5	1.9
Engineering	1,455	9	63,806	29,979	2,819	443	334	21	.7	1.1	.7
Physical sciences	576	6	25,728	3,392	5,892	114	8	9	.4	.2	.2
Earth, atmospheric, & ocean sciences	358	6	9,952	2,808	893	135	30	44	1.4	1.1	4.9
Mathematical sciences	388	5	11,126	3,312	274	268	75	4	2.4	2.3	1.5
Computer sciences	291	7	17,470	13,597	363	307	93	8	1.8	.7	2.2
Agricultural sciences	333	4	8,529	2,492	656	88	22	7	1.0	.9	1.1
Biological sciences	1,972	28	45,054	7,650	15,474	1,019	96	176	2.3	1.3	1.1
Psychology	569	15	29,032	10,757	606	785	310	8	2.7	2.9	1.3
Social sciences	1,315	19	49,828	22,407	382	584	687	0	1.2	3.1	.0
Health fields	2,860	71	41,019	24,896	12,135	928	1,371	482	2.3	5.5	4.0
Fall 1997											
Total, all areas	10,032	178	302,338	123,694	38,103	4,641	3,204	757	1.5	2.6	2.0
Engineering	1,433	21	63,835	30,869	2,944	606	899	20	.9	2.9	.7
Physical sciences	572	7	26,268	3,384	5,864	152	70	8	.6	2.1	.1
Earth, atmospheric, & ocean sciences	349	7	9,934	3,052	934	193	21	30	1.9	.7	3.2
Mathematical sciences	391	7	11,529	3,304	302	144	50	2	1.2	1.5	.7
Computer sciences	284	5	16,502	13,590	315	301	387	0	1.8	2.8	.0
Agricultural sciences	328	1	8,677	2,401	692	30	1	5	.3	.0	.7
Biological sciences	1,952	26	45,063	7,807	14,916	646	108	199	1.4	1.4	1.3
Psychology	565	20	29,194	10,690	567	784	556	1	2.7	5.2	.2
Social sciences	1,317	33	51,609	22,716	362	892	403	3	1.7	1.8	.8
Health fields	2,841	51	39,727	25,881	11,207	893	709	489	2.2	2.7	4.4
Fall 1996											
Total, all areas	10,059	200	304,720	128,092	37,028	6,116	2,294	1,068	2.0	1.8	2.9
Engineering	1,412	14	64,074	32,588	2,662	829	398	13	1.3	1.2	.5
Physical sciences	570	8	27,317	3,515	5,803	400	19	58	1.5	.5	1.0
Earth, atmospheric, & ocean sciences	347	7	10,255	3,427	859	244	98	9	2.4	2.9	1.0
Mathematical sciences	393	9	12,324	3,671	326	279	56	7	2.3	1.5	2.1
Computer sciences	281	4	15,633	13,478	247	545	145	8	3.5	1.1	3.2
Agricultural sciences	318	3	8,882	2,347	665	69	49	5	.8	2.1	.8
Biological sciences	1,980	38	45,837	7,843	14,918	1,011	163	322	2.2	2.1	2.2
Psychology	558	19	28,988	10,429	589	844	252	0	2.9	2.4	.0
Social sciences	1,316	34	53,212	23,898	444	1,219	655	2	2.3	2.7	.5
Health fields	2,884	64	38,198	26,896	10,515	676	459	644	1.8	1.7	6.1

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 6. Imputation for nonresponse in master's-granting institutions,
by field and enrollment status: 1996-1998**

Area of science and engineering	Number of graduate departments		Graduate enrollment								
			Total in survey			Number imputed			Imputation rate (percent)		
	In universe	Totally imputed	Full-time	Part-time	Postdoctorates	Full-time	Part-time	Postdoctorates	Full-time	Part-time	Postdoctorates
Fall 1998											
Total, all areas	1,601	20	26,065	36,855	125	424	549	28	1.6	1.5	22.4
Engineering	185	0	1,943	4,559	11	0	0	0	.0	.0	.0
Physical sciences	121	2	672	773	80	15	21	28	2.2	2.7	35.0
Earth, atmospheric, & ocean sciences	68	1	537	1,067	4	3	8	0	.6	.7	.0
Mathematical sciences	110	1	656	1,369	0	1	0	0	.2	.0	.0
Computer sciences	94	1	2,267	4,516	5	8	6	0	.4	.1	.0
Agricultural sciences	31	0	471	319	10	0	0	0	.0	.0	.0
Biological sciences	178	0	1,954	2,402	6	0	0	0	.0	.0	.0
Psychology	248	6	6,550	6,716	6	282	321	0	4.3	4.8	.0
Social sciences	327	8	3,942	7,648	1	102	147	0	2.6	1.9	.0
Health fields	239	1	7,073	7,486	2	13	46	0	.2	.6	.0
Fall 1997											
Total, all areas	1,573	32	24,711	36,628	115	1,063	659	0	4.3	1.8	0.0
Engineering	181	5	1,751	4,578	7	81	95	0	4.6	2.1	.0
Physical sciences	121	0	624	832	71	0	0	0	.0	.0	.0
Earth, atmospheric, & ocean sciences	66	2	616	1,042	4	18	6	0	2.9	.6	.0
Mathematical sciences	111	0	615	1,281	2	0	0	0	.0	.0	.0
Computer sciences	92	4	1,832	4,072	3	159	128	0	8.7	3.1	.0
Agricultural sciences	30	0	433	303	9	0	0	0	.0	.0	.0
Biological sciences	176	0	1,934	2,331	8	0	0	0	.0	.0	.0
Psychology	247	7	6,413	6,910	7	569	249	0	8.9	3.6	.0
Social sciences	318	12	3,879	7,819	0	218	174	0	5.6	2.2	.0
Health fields	231	2	6,614	7,460	4	18	7	0	.3	.1	.0
Fall 1996											
Total, all areas	1,532	18	23,733	37,674	79	236	871	0	1.0	2.3	0.0
Engineering	173	3	1,777	4,784	12	5	73	0	.3	1.5	.0
Physical sciences	117	1	639	884	36	0	18	0	.0	2.0	.0
Earth, atmospheric, & ocean sciences	63	0	571	1,027	2	0	0	0	.0	.0	.0
Mathematical sciences	107	0	642	1,378	0	0	0	0	.0	.0	.0
Computer sciences	92	2	1,540	3,941	3	63	99	0	4.1	2.5	.0
Agricultural sciences	31	0	416	269	12	0	0	0	.0	.0	.0
Biological sciences	174	1	1,907	2,541	8	1	32	0	.1	1.3	.0
Psychology	239	2	6,480	7,312	5	56	148	0	.9	2.0	.0
Social sciences	317	8	3,700	7,837	0	87	432	0	2.4	5.5	.0
Health fields	219	1	6,061	7,701	1	24	69	0	.4	.9	.0

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 7. Imputation rates for all departments
at all graduate institutions: fall 1998**

[Number of imputed departments = 1,896]

Items 5 and 6 Enrollment status, mechanism of support, and gender of S&E graduate students	Students receiving financial assistance											Self support (includ. loans & family sources)	Total for all sources (sum of columns A - K)		
	Federal sources (excluding loans)						Non-Federal sources								
	DoD	HHS		NSF	Dept. of Agr.	NASA	Other Federal sources	Inst. support	Foreign sources	Other U.S. sources					
		(B)	(C)												
Item 5 Full-time graduate S&E students:															
Graduate fellowships	3.5	5.0	20.2	7.6	2.1	5.8	5.8	7.4	7.9	7.0	NA	7.2			
Graduate traineeships	26.9	9.4	16.4	6.1	28.6	6.8	13.0	9.3	12.6	12.9	NA	10.9			
Graduate research assistants	11.2	10.7	6.4	9.9	4.4	8.8	8.2	11.3	5.5	8.1	NA	9.9			
Graduate teaching assistants	NA	17.7	22.6	3.7	16.2	39.1	8.7	9.8	NA	12.8	NA	9.8			
Other types of support	70.4	10.4	12.9	3.0	1.7	0.0	17.8	15.5	12.5	6.4	19.1	18.8			
Full-time total	24.0	10.0	14.0	9.3	4.5	8.4	9.2	10.4	9.4	7.9	19.1	1.6			
Full-time women	18.2	10.5	17.3	7.7	6.7	7.9	12.2	12.2	8.5	7.9	22.3	5.2			
Full-time first-time total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.1			
Full-time first-time women	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.9			
Item 6 Part-time graduate S&E students:															
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3			
Women	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.5			

Item 7 Race/ethnicity of full-time and part-time graduate S&E students, by sex	U.S. citizens and permanent residents								Total (sum of columns A - H)	
	Black non- Hispanic (A)	American Indian/ Alaskan Native (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non- Hispanic (E)	Other (F)	Unknown (G)	Foreign (H)		
Men enrolled full-time	9.6	2.8	6.9	6.8	7.5	6.0	8.1	7.8	4.6	
Women enrolled full-time	10.0	3.7	5.2	7.9	7.6	8.4	9.5	6.5	5.2	
Full-time, total	9.8	3.3	6.1	7.4	7.5	7.1	7.9	7.3	1.6	
Men enrolled part-time	10.4	3.7	8.6	9.3	11.3	14.5	10.3	11.1	6.8	
Women enrolled part-time	10.9	3.5	6.1	11.9	10.5	5.7	9.8	11.1	6.5	
Part-time, total	10.7	3.6	7.5	10.6	10.9	10.3	10.0	11.1	2.3	

Item 8 S&E postdoctorates and nonfaculty research staff with doctorates	Postdoctorates							Other non- faculty research staff with doctor- ates (G)					
	Source of support				Non- Federal (D)	Total for all sources (A - D) (E)	Foreign postdoc- torates (F)						
	Federal												
	Fellow- ships (A)	Trainee- ships (B)	Research grants (C)										
Total	6.9	13.2	10.0	11.5	5.7	5.8	5.6						
Women	5.4	11.5	9.4	10.0	5.9	6.0	6.0						
With MD, DDS or DVM degrees	6.8	13.3	8.7	8.9	5.6	4.8	5.0						

KEY: NA = not applicable

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Technical Table 8. Comparison of graduate enrollment data as originally published and as modified through the fall 1998 graduate student survey cycle: 1975-1998

Page 1 of 2

Year	Total, all institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	Percent change	Original total	Revised total	Percent change	Original total	Revised total	Percent change
Total graduate enrollment in surveyed fields									
1975 ¹	336,843	328,550	-2.5	290,662	295,718	1.7	46,181	32,832	-28.9
1976	345,979	333,755	-3.5	297,280	299,916	.9	48,699	33,839	-30.5
1977	362,978	345,416	-4.8	306,710	307,763	.3	56,268	37,653	-33.1
1978 ²	N/A	339,912	N/A	311,982	300,854	-3.6	N/A	39,058	N/A
1979	375,267	357,609	-4.7	321,770	317,086	-1.5	53,497	40,523	-24.3
1980	383,210	367,111	-4.2	333,658	326,608	-2.1	49,552	40,503	-18.3
1981	392,034	375,158	-4.3	340,203	333,270	-2.0	51,831	41,888	-19.2
1982	399,682	382,334	-4.3	347,414	339,776	-2.2	52,268	42,558	-18.6
1983	413,564	390,474	-5.6	358,276	346,591	-3.3	55,288	43,883	-20.6
1984 ³	415,064	394,670	-4.9	363,470	348,895	-4.0	51,594	45,775	-11.3
1985 ³	434,836	404,021	-7.1	371,052	358,255	-3.4	63,784	45,766	-28.2
1986 ³	446,102	415,542	-6.9	384,203	368,840	-4.0	61,899	46,702	-24.6
1987 ³	449,585	421,512	-6.2	388,681	374,375	-3.7	60,904	47,137	-22.6
1988	445,595	424,613	-4.7	391,683	380,160	-2.9	53,912	44,453	-17.5
1989	440,983	434,567	-1.5	385,025	387,632	.7	55,958	46,935	-16.1
1990	458,943	452,178	-1.5	398,405	401,323	.7	60,538	50,855	-16.0
1991	475,691	471,262	-.9	411,296	416,646	1.3	64,395	54,616	-15.2
1992	495,397	493,632	-.4	427,792	435,696	1.8	67,605	57,936	-14.3
1993	506,678	504,449	-.4	440,875	443,757	.7	65,803	60,692	-7.8
1994	506,626	504,542	-.4	441,480	444,093	.6	65,146	60,449	-7.2
1995	501,510	499,732	-.4	436,328	438,306	.5	65,182	61,426	-5.8
1996	494,526	494,219	-.1	430,631	432,812	.5	63,895	61,407	-3.9
1997	487,104	487,371	.1	424,650	426,032	-.3	62,454	61,339	-1.8
1998	485,754	N/A	N/A	422,834	N/A	N/A	62,920	N/A	N/A
Full-time									
1975 ¹	228,316	219,687	-3.8	210,641	207,494	-1.5	17,675	12,193	-31.0
1976	233,748	223,446	-4.4	215,355	211,288	-1.9	18,393	12,158	-33.9
1977	238,202	226,776	-4.8	218,226	213,343	-2.2	19,976	13,433	-32.8
1978 ²	N/A	223,030	N/A	217,588	209,198	-3.9	N/A	13,832	N/A
1979	243,331	231,790	-4.7	224,057	217,546	-2.9	19,274	14,244	-26.1
1980	249,111	238,448	-4.3	230,601	223,720	-3.0	18,510	14,728	-20.4
1981	253,428	242,076	-4.5	234,529	227,523	-3.0	18,899	14,553	-23.0
1982	255,959	244,796	-4.4	237,676	230,599	-3.0	18,283	14,197	-22.3
1983	263,800	252,055	-4.5	243,646	236,520	-2.9	20,154	15,535	-22.9
1984 ³	264,146	253,922	-3.9	246,848	237,542	-3.8	17,298	16,380	-5.3
1985 ³	269,319	257,287	-4.5	249,666	241,149	-3.4	19,653	16,138	-17.9
1986 ³	279,235	266,182	-4.7	259,980	249,850	-3.9	19,255	16,332	-15.2
1987 ³	285,200	271,066	-5.0	264,862	254,415	-3.9	20,338	16,651	-18.1
1988	288,619	275,194	-4.7	268,385	259,897	-3.2	20,234	15,297	-24.4
1989	286,619	282,719	-1.4	267,554	267,094	-.2	19,065	15,625	-18.0
1990	295,836	292,830	-1.0	275,262	275,768	.2	20,574	17,062	-17.1
1991	308,669	307,040	-.5	286,756	288,250	.5	21,913	18,790	-14.3
1992	323,399	322,609	-.2	299,753	302,226	.8	23,646	20,383	-13.8
1993	330,249	329,679	-.2	307,181	308,195	.3	23,068	21,484	-6.9
1994	331,969	332,129	.0	307,964	309,817	.6	24,005	22,312	-7.1
1995	330,235	329,148	-.3	305,652	306,125	.2	24,583	23,023	-6.3
1996	328,368	328,453	.0	303,586	304,720	.4	24,782	23,733	-4.2
1997	326,842	327,049	.1	301,573	302,338	.3	25,269	24,711	-2.2
1998	327,609	N/A	N/A	301,544	N/A	N/A	26,065	N/A	N/A

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**LIST OF DOCTORATE-GRANTING AND MASTER'S-
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**Table 1. Total enrollment in all institutions of higher education, by level of enrollment
and broad field by selected years: 1975-1998**

Year	Total	Under-graduate enrollment	Graduate enrollment					First professional enrollment
			Total, all fields	Sciences	Engineering	Health fields	All other fields	
Total, all U.S. institutions								
1975	11,289,129	9,777,634	1,267,537	234,760	68,271	25,519	938,987	243,958
1980	12,234,644	10,603,579	1,351,268	251,337	74,312	41,462	984,157	279,797
1985 ¹	12,411,945	10,749,752	1,384,862	262,068	95,991	45,962	980,841	277,331
1990	13,983,255	12,110,847	1,596,037	289,510	107,625	55,043	1,143,859	276,371
1991	14,527,724	12,595,335	1,648,952	299,121	113,576	58,565	1,177,690	283,437
1992	14,657,118	12,693,778	1,679,644	312,609	118,035	62,988	1,186,012	283,696
1993	14,477,792	12,482,813	1,699,292	319,028	116,858	68,563	1,194,843	295,687
1994	14,449,476	12,417,701	1,734,371	318,228	113,023	73,291	1,229,829	297,404
1995	14,445,438	12,399,826	1,745,130	315,356	107,199	77,177	1,245,398	300,482
1996	14,481,915	12,424,570	1,756,474	312,140	103,223	78,856	1,262,255	300,871
1997	N/A	N/A	N/A	306,656	101,033	79,682	N/A	N/A
1998	N/A	N/A	N/A	304,993	100,287	80,474	N/A	N/A
Subtotal, 50 States and DC								
1975	11,184,859	9,679,455	1,263,137	233,885	68,217	25,173	935,862	242,267
1980	12,096,895	10,475,055	1,344,073	249,839	74,264	41,126	978,844	277,767
1985 ¹	12,247,055	10,596,674	1,376,181	260,170	95,889	45,410	974,712	274,200
1990	13,818,637	11,959,106	1,586,165	287,840	107,516	54,447	1,136,362	273,366
1991	14,358,953	12,439,287	1,639,135	297,316	113,408	57,936	1,170,475	280,531
1992	14,487,359	12,537,700	1,668,737	310,795	117,825	62,252	1,177,865	280,922
1993	14,304,803	12,323,959	1,688,413	317,168	116,645	67,824	1,186,776	292,431
1994	14,278,790	12,262,608	1,721,469	316,344	112,826	72,517	1,219,782	294,713
1995	14,261,781	12,231,719	1,732,470	313,332	106,982	76,283	1,235,873	297,592
1996	14,300,255	12,259,417	1,743,099	310,131	102,969	78,040	1,251,959	297,739
1997	N/A	N/A	N/A	304,616	100,750	79,201	N/A	N/A
1998	N/A	N/A	N/A	302,719	100,020	79,902	N/A	N/A
Outlying areas								
1975	104,270	98,179	4,400	875	54	346	3,125	1,691
1980	137,749	128,524	7,195	1,498	48	336	5,313	2,030
1985 ¹	164,890	153,078	8,681	1,898	102	552	6,129	3,131
1990	164,618	151,741	9,872	1,670	109	596	7,497	3,005
1991	168,771	156,048	9,817	1,805	168	629	7,215	2,906
1992	169,759	156,078	10,907	1,814	210	736	8,147	2,774
1993	172,989	158,854	10,879	1,860	213	739	8,067	3,256
1994	170,686	155,093	12,902	1,884	197	774	10,047	2,691
1995	183,657	168,107	12,660	2,024	217	894	9,525	2,890
1996	181,660	165,153	13,375	2,009	254	816	10,296	3,132
1997	N/A	N/A	N/A	2,040	283	481	N/A	N/A
1998	N/A	N/A	N/A	2,274	267	572	N/A	N/A

¹ NSF figures for 1985 include estimates for master's-granting institutions.

KEY: N/A = Not available

SOURCES: U.S. Department of Education/NCES, Survey of Opening Fall Enrollment, and National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering.

**Table 2. Graduate students in science, engineering, and health fields in all institutions,
by field: 1975-1998**

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	303,031	234,760	26,310	12,079	16,892	8,415	10,702	46,398	36,191	77,773	
1976	305,465	238,808	26,631	12,819	17,071	8,627	11,285	47,728	37,458	77,189	
1977	311,741	243,056	26,855	13,455	16,052	9,108	11,677	49,234	38,617	78,058	
1978 ¹	304,301	236,604	26,274	13,276	14,812	9,847	11,869	47,923	37,522	75,081	
1979	319,092	247,364	26,695	13,737	15,031	11,690	12,240	48,199	39,766	80,006	
1980	325,649	251,337	26,934	14,051	15,311	13,578	12,452	47,596	40,610	80,805	
1981	332,041	252,486	27,357	14,266	15,881	16,437	12,355	46,639	40,666	78,885	
1982	338,916	255,229	28,186	15,020	17,157	19,812	12,583	45,970	40,073	76,428	
1983	347,017	255,898	29,453	15,453	17,358	23,333	12,429	45,644	40,905	71,323	
1984 ²	349,698	256,986	30,056	15,505	17,443	25,526	12,226	45,763	40,931	69,536	
1985 ²	358,059	262,068	30,981	15,420	17,563	29,769	11,561	46,112	40,721	69,941	
1986 ²	368,104	266,230	32,246	15,066	17,949	31,349	11,458	46,764	41,241	70,157	
1987 ²	373,341	269,388	32,727	14,371	18,508	32,051	11,118	46,747	42,612	71,254	
1988	375,277	272,448	32,962	13,867	19,077	32,227	11,135	47,565	43,963	71,652	
1989	382,747	278,704	33,616	13,643	19,247	32,482	11,190	48,852	45,528	74,146	
1990	397,135	289,510	34,075	13,984	19,774	34,257	11,316	49,989	48,167	77,948	
1991	412,697	299,121	34,710	14,480	19,952	34,610	11,506	51,778	51,343	80,742	
1992	430,644	312,609	35,348	15,347	20,355	36,293	11,827	54,177	53,484	85,778	
1993	435,886	319,028	35,318	15,805	20,000	36,189	11,914	56,452	54,557	88,793	
1994	431,251	318,228	34,449	16,042	19,579	34,128	12,199	58,143	54,554	89,134	
1995	422,555	315,356	33,417	15,805	18,509	33,432	12,367	58,736	53,641	89,449	
1996	415,363	312,140	32,355	15,280	18,015	34,592	11,914	58,128	53,209	88,647	
1997	407,689	306,656	31,108	14,644	16,729	35,996	11,814	57,135	53,207	86,023	
1998	405,280	304,993	30,565	14,364	16,463	37,850	11,811	57,060	53,055	83,825	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	68,271	1,670	5,034	12,560	16,320	11,663	8,601	2,352	10,071	25,519	
1976	66,657	1,477	5,205	11,995	15,926	10,687	8,313	2,375	10,679	28,290	
1977	68,685	1,518	5,201	12,335	17,406	10,438	8,722	2,559	10,506	33,675	
1978 ¹	67,697	1,463	5,341	12,358	17,127	9,494	8,638	2,570	10,706	35,611	
1979	71,728	1,481	5,605	12,822	17,715	10,729	9,251	2,756	11,369	38,517	
1980	74,312	1,737	6,015	13,097	19,132	9,698	9,888	2,910	11,835	41,462	
1981	79,555	1,883	6,496	14,089	20,113	9,737	10,618	3,125	13,494	43,117	
1982	83,687	1,941	7,189	14,122	21,927	9,577	11,467	3,124	14,340	43,418	
1983	91,119	2,305	7,563	14,910	25,295	9,247	12,911	3,447	15,441	43,457	
1984 ²	92,712	2,340	7,373	15,192	26,388	9,282	13,855	3,657	14,625	44,972	
1985 ²	95,991	2,538	7,150	14,902	28,203	10,499	14,157	3,943	14,599	45,962	
1986 ²	101,874	2,804	7,012	14,976	29,969	11,529	15,713	4,208	15,663	47,438	
1987 ²	103,953	3,015	7,111	14,682	31,399	12,220	16,366	4,366	14,794	48,171	
1988	102,829	3,223	6,618	14,811	32,035	11,393	16,151	4,337	14,261	49,336	
1989	104,043	3,524	6,460	14,909	33,257	11,094	16,265	4,594	13,940	51,820	
1990	107,625	3,934	6,735	15,542	33,722	11,248	16,879	4,941	14,624	55,043	
1991	113,576	4,120	7,127	17,398	35,182	12,676	17,730	5,160	14,183	58,565	
1992	118,035	4,036	7,397	19,572	36,460	13,525	18,637	5,512	12,896	62,988	
1993	116,858	3,940	7,516	19,583	35,314	13,596	18,477	5,363	13,069	68,563	
1994	113,023	3,715	7,608	19,925	33,050	13,661	17,761	5,191	12,112	73,291	
1995	107,199	3,343	7,424	19,218	30,747	13,143	16,363	4,920	12,041	77,177	
1996	103,223	3,208	7,373	18,528	29,736	12,399	15,509	4,713	11,757	78,856	
1997	101,033	3,083	7,247	17,049	30,618	11,736	15,045	4,649	11,606	79,682	
1998	100,287	3,137	7,060	16,374	31,398	11,059	14,696	4,644	11,919	80,474	

¹ Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 3. Male graduate students in science, engineering, and health fields in all institutions,
by field: 1975-1998**

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	233,818	168,833	22,816	11,176	11,933	7,549	9,570	32,511	20,518	52,760	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	229,812	163,960	22,202	10,850	11,009	9,367	9,575	30,318	19,424	51,215	
1980	231,253	163,280	22,338	10,844	11,247	10,491	9,594	29,295	19,027	50,444	
1981	232,193	160,384	22,348	10,848	11,400	12,228	9,533	27,992	17,900	48,135	
1982	235,340	160,428	22,767	11,297	12,079	14,366	9,498	26,797	16,976	46,648	
1983	240,498	159,186	23,576	11,552	12,158	16,719	9,290	26,293	16,648	42,950	
1984 ²	242,152	159,737	23,898	11,632	12,275	18,653	9,088	26,246	16,180	41,765	
1985 ²	247,421	162,510	24,474	11,493	12,209	22,208	8,570	26,208	15,597	41,751	
1986 ²	253,686	164,177	25,384	11,119	12,470	23,497	8,505	26,293	15,377	41,532	
1987 ²	256,149	165,159	25,613	10,592	12,912	24,036	8,166	26,314	15,683	41,843	
1988	254,005	164,300	25,465	10,062	13,301	24,033	8,038	26,304	15,502	41,595	
1989	256,849	166,406	25,815	9,785	13,262	24,494	8,045	26,618	15,673	42,714	
1990	263,394	170,441	26,007	9,865	13,575	26,058	7,981	26,947	15,822	44,186	
1991	271,845	173,984	26,146	10,025	13,654	26,340	7,939	27,643	16,556	45,681	
1992	280,397	179,595	26,504	10,489	13,806	27,838	8,059	28,702	16,650	47,547	
1993	279,289	180,123	26,116	10,745	13,362	27,767	7,826	29,399	16,567	48,341	
1994	272,120	177,146	25,290	10,689	13,044	26,043	7,911	29,988	16,416	47,765	
1995	262,341	173,156	24,327	10,336	12,248	25,306	7,935	29,890	15,877	47,237	
1996	253,629	168,658	23,303	9,786	11,794	25,802	7,502	29,360	15,403	45,708	
1997	245,643	163,336	22,257	9,187	10,857	26,123	7,280	28,513	15,528	43,591	
1998	241,828	160,615	21,831	8,733	10,483	27,206	7,112	28,003	15,314	41,933	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	64,985	1,485	4,827	11,507	16,696	9,683	8,449	2,376	9,962	11,109	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	65,852	1,432	4,991	11,503	16,782	9,473	8,782	2,468	10,421	11,028	
1980	67,973	1,663	5,336	11,732	18,149	8,343	9,354	2,607	10,789	11,707	
1981	71,809	1,816	5,718	12,515	18,837	8,194	9,987	2,735	12,007	11,367	
1982	74,912	1,831	6,288	12,373	20,376	7,958	10,748	2,704	12,634	10,958	
1983	81,312	2,182	6,547	13,051	23,227	7,729	12,106	2,999	13,471	10,430	
1984 ²	82,415	2,208	6,401	13,165	24,175	7,674	12,899	3,189	12,704	10,501	
1985 ²	84,911	2,375	6,146	12,755	25,768	8,719	13,146	3,340	12,662	10,795	
1986 ²	89,509	2,604	5,973	12,829	27,061	9,434	14,554	3,533	13,521	11,049	
1987 ²	90,990	2,791	5,957	12,579	28,301	9,976	15,070	3,637	12,679	11,795	
1988	89,705	2,996	5,543	12,517	28,757	9,300	14,749	3,581	12,262	11,407	
1989	90,443	3,281	5,431	12,474	29,742	8,984	14,867	3,784	11,880	11,884	
1990	92,953	3,645	5,589	12,853	30,007	9,111	15,437	4,048	12,263	12,284	
1991	97,861	3,793	5,870	14,296	31,311	10,321	16,219	4,173	11,878	13,053	
1992	100,802	3,688	6,003	15,918	32,167	10,870	16,939	4,443	10,774	13,837	
1993	99,166	3,583	6,017	15,725	30,992	11,003	16,703	4,336	10,807	15,213	
1994	94,974	3,357	6,082	15,714	28,946	10,866	15,938	4,122	9,949	16,253	
1995	89,185	2,992	5,863	14,986	26,652	10,388	14,686	3,861	9,757	17,065	
1996	84,971	2,856	5,731	14,228	25,607	9,685	13,873	3,653	9,338	18,109	
1997	82,307	2,712	5,538	12,889	26,159	9,125	13,266	3,555	9,063	18,885	
1998	81,213	2,755	5,339	12,294	26,562	8,664	12,934	3,529	9,136	19,412	

¹ Master's-granting institutions were not surveyed in 1978.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 4. Female graduate students in science, engineering, and health fields in all institutions,
by field: 1975-1998**

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	77,923	74,223	4,039	2,279	4,119	1,559	2,107	16,723	18,099	25,298	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	89,280	83,404	4,493	2,887	4,022	2,323	2,665	17,881	20,342	28,791	
1980	94,396	88,057	4,596	3,207	4,064	3,087	2,858	18,301	21,583	30,361	
1981	99,848	92,102	5,009	3,418	4,481	4,209	2,822	18,647	22,766	30,750	
1982	103,576	94,801	5,419	3,723	5,078	5,446	3,085	19,173	23,097	29,780	
1983	106,519	96,712	5,877	3,901	5,200	6,614	3,139	19,351	24,257	28,373	
1984 ²	107,546	97,249	6,158	3,873	5,168	6,873	3,138	19,517	24,751	27,771	
1985 ²	110,638	99,558	6,507	3,927	5,354	7,561	2,991	19,904	25,124	28,190	
1986 ²	114,418	102,053	6,862	3,947	5,479	7,852	2,953	20,471	25,864	28,625	
1987 ²	117,192	104,229	7,114	3,779	5,596	8,015	2,952	20,433	26,929	29,411	
1988	121,272	108,148	7,497	3,805	5,776	8,194	3,097	21,261	28,461	30,057	
1989	125,898	112,298	7,801	3,858	5,985	7,988	3,145	22,234	29,855	31,432	
1990	133,741	119,069	8,068	4,119	6,199	8,199	3,335	23,042	32,345	33,762	
1991	140,852	125,137	8,564	4,455	6,298	8,270	3,567	24,135	34,787	35,061	
1992	150,247	133,014	8,844	4,858	6,549	8,455	3,768	25,475	36,834	38,231	
1993	156,597	138,905	9,202	5,060	6,638	8,422	4,088	27,053	37,990	40,452	
1994	159,131	141,082	9,159	5,353	6,535	8,085	4,288	28,155	38,138	41,369	
1995	160,214	142,200	9,090	5,469	6,261	8,126	4,432	28,846	37,764	42,212	
1996	161,734	143,482	9,052	5,494	6,221	8,790	4,412	28,768	37,806	42,939	
1997	162,046	143,320	8,851	5,457	5,872	9,873	4,534	28,622	37,679	42,432	
1998	163,452	144,378	8,734	5,631	5,980	10,644	4,699	29,057	37,741	41,892	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	3,700	33	374	828	710	755	273	183	544	22,566	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	5,876	49	614	1,319	933	1,256	469	288	948	27,489	
1980	6,339	74	679	1,365	983	1,355	534	303	1,046	29,755	
1981	7,746	67	778	1,574	1,276	1,543	631	390	1,487	31,750	
1982	8,775	110	901	1,749	1,551	1,619	719	420	1,706	32,460	
1983	9,807	123	1,016	1,859	2,068	1,518	805	448	1,970	33,027	
1984 ²	10,297	132	972	2,027	2,213	1,608	956	468	1,921	34,471	
1985 ²	11,080	163	1,004	2,147	2,435	1,780	1,011	603	1,937	35,167	
1986 ²	12,365	200	1,039	2,147	2,908	2,095	1,159	675	2,142	36,389	
1987 ²	12,963	224	1,154	2,103	3,098	2,244	1,296	729	2,115	36,376	
1988	13,124	227	1,075	2,294	3,278	2,093	1,402	756	1,999	37,929	
1989	13,600	243	1,029	2,435	3,515	2,110	1,398	810	2,060	39,936	
1990	14,672	289	1,146	2,689	3,715	2,137	1,442	893	2,361	42,759	
1991	15,715	327	1,257	3,102	3,871	2,355	1,511	987	2,305	45,512	
1992	17,233	348	1,394	3,654	4,293	2,655	1,698	1,069	2,122	49,151	
1993	17,692	357	1,499	3,858	4,322	2,593	1,774	1,027	2,262	53,350	
1994	18,049	358	1,526	4,211	4,104	2,795	1,823	1,069	2,163	57,038	
1995	18,014	351	1,561	4,232	4,095	2,755	1,677	1,059	2,284	60,112	
1996	18,252	352	1,642	4,300	4,129	2,714	1,636	1,060	2,419	60,747	
1997	18,726	371	1,709	4,160	4,459	2,611	1,779	1,094	2,543	60,797	
1998	19,074	382	1,721	4,080	4,836	2,395	1,762	1,115	2,783	61,062	

¹ Master's-granting institutions were not surveyed in 1978.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 5. Full-time graduate students in science, engineering, and health fields
in all institutions, by field: 1975-1998

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	202,300	164,538	21,916	9,557	10,694	4,473	8,889	36,874	24,105	48,030	
1976	204,861	167,979	22,252	10,091	10,952	4,748	9,436	37,905	25,643	46,952	
1977	206,452	169,296	22,505	10,424	10,365	4,604	9,711	38,415	25,703	47,569	
1978 ¹	201,782	164,277	22,135	10,369	9,769	4,930	9,727	37,788	24,754	44,805	
1979	209,044	169,077	22,535	10,625	9,667	5,853	9,952	37,996	25,848	46,601	
1980	214,465	171,838	22,917	10,871	9,901	6,587	10,168	37,690	26,671	47,033	
1981	218,003	172,278	23,307	10,934	10,152	7,445	10,312	37,277	26,570	46,281	
1982	221,921	172,166	24,038	11,319	10,813	9,171	10,136	36,688	25,667	44,334	
1983	229,456	175,548	25,204	11,968	10,955	10,600	9,976	36,740	26,561	43,544	
1984 ²	231,015	175,848	25,852	11,734	11,309	11,436	9,908	37,114	25,969	42,526	
1985 ²	233,992	178,096	26,669	11,334	11,816	13,861	9,250	37,001	25,335	42,830	
1986 ²	242,826	182,660	27,762	11,249	12,388	15,020	9,341	37,809	26,255	42,836	
1987 ²	247,205	185,273	28,412	10,435	13,043	15,336	9,094	38,235	27,256	43,462	
1988	250,657	187,650	28,574	10,192	13,512	15,133	9,122	39,209	28,118	43,790	
1989	256,906	192,531	29,207	10,021	13,681	15,606	9,070	40,348	29,348	45,250	
1990	265,399	199,422	29,485	10,244	13,865	16,689	9,100	40,945	30,618	48,476	
1991	277,174	206,140	30,117	10,373	14,256	16,516	9,289	42,700	32,258	50,631	
1992	290,510	216,084	30,673	10,986	14,679	17,486	9,452	44,389	34,162	54,257	
1993	294,030	220,233	30,611	11,367	14,530	17,374	9,468	46,481	34,782	55,620	
1994	293,048	221,482	30,043	11,470	14,226	16,674	9,492	48,017	35,288	56,272	
1995	287,253	219,479	28,902	11,275	13,410	16,490	9,620	48,330	35,222	56,230	
1996	284,194	218,343	27,956	10,826	12,966	17,173	9,298	47,744	35,468	56,912	
1997	280,708	215,122	26,892	10,550	12,144	18,334	9,110	46,997	35,607	55,488	
1998	279,517	213,768	26,400	10,489	11,782	19,737	9,000	47,008	35,582	53,770	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	37,762	1,245	3,515	7,363	8,278	4,152	4,931	1,787	6,491	17,387	
1976	36,882	1,165	3,691	7,025	8,147	3,578	4,919	1,860	6,497	18,585	
1977	37,156	1,187	3,873	7,094	8,528	3,343	4,883	1,951	6,297	20,324	
1978 ¹	37,505	1,140	3,938	7,335	8,509	3,249	4,950	1,973	6,411	21,248	
1979	39,967	1,152	4,218	7,623	9,039	3,743	5,428	2,135	6,629	22,746	
1980	42,627	1,327	4,490	7,958	9,963	3,736	5,841	2,254	7,058	23,983	
1981	45,725	1,483	4,989	8,799	10,450	3,603	6,422	2,454	7,525	24,073	
1982	49,755	1,522	5,608	9,381	11,533	3,807	7,267	2,478	8,159	22,875	
1983	53,908	1,840	5,869	9,804	13,265	3,288	8,330	2,704	8,808	22,599	
1984 ²	55,167	1,854	5,734	10,086	13,925	3,393	8,698	2,872	8,605	22,907	
1985 ²	55,896	1,994	5,546	9,749	14,799	3,456	8,875	3,093	8,384	23,295	
1986 ²	60,166	2,154	5,594	9,971	16,290	3,807	9,789	3,370	9,191	23,356	
1987 ²	61,932	2,372	5,674	9,628	17,101	4,156	10,230	3,436	9,335	23,861	
1988	63,007	2,533	5,359	9,946	17,706	4,295	10,416	3,466	9,286	24,537	
1989	64,375	2,772	5,282	9,964	18,466	4,658	10,492	3,720	9,021	25,813	
1990	65,977	3,010	5,443	10,128	18,675	4,770	10,867	3,930	9,154	27,431	
1991	71,034	3,325	5,788	11,328	19,904	5,598	11,687	4,058	9,346	29,866	
1992	74,426	3,306	5,946	12,454	20,996	6,081	12,383	4,274	8,986	32,099	
1993	73,797	3,262	6,041	12,458	20,370	5,902	12,395	4,249	9,120	35,649	
1994	71,566	3,000	6,105	12,641	19,412	5,910	11,875	4,108	8,515	39,081	
1995	67,774	2,693	5,957	12,248	18,187	5,342	11,128	3,880	8,339	41,895	
1996	65,851	2,576	5,909	11,791	17,989	5,128	10,690	3,693	8,075	44,259	
1997	65,586	2,529	5,784	11,268	18,927	5,075	10,432	3,661	7,910	46,341	
1998	65,749	2,565	5,601	11,046	19,790	4,942	10,073	3,702	8,030	48,092	

¹ Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 6. Male full-time graduate students in science, engineering, and health fields in all institutions,
by field: 1975-1998**

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	156,169	121,312	19,205	8,457	8,476	4,006	7,945	26,183	14,591	32,449	
1977	154,398	119,499	19,293	8,641	8,083	3,845	7,903	25,866	13,949	31,919	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	151,981	115,444	19,044	8,404	7,497	4,803	7,745	24,480	13,277	30,194	
1980	153,138	114,365	19,214	8,388	7,595	5,184	7,778	23,804	12,779	29,623	
1981	154,075	112,963	19,306	8,361	7,612	5,718	7,884	23,189	12,007	28,886	
1982	156,404	111,896	19,641	8,532	8,022	6,860	7,592	22,144	11,223	27,882	
1983	161,537	113,248	20,371	8,995	8,037	7,961	7,448	21,961	11,361	27,114	
1984 ²	162,399	113,279	20,755	8,876	8,328	8,693	7,328	22,012	10,714	26,573	
1985 ²	164,198	114,583	21,241	8,500	8,614	10,806	6,853	21,798	10,232	26,539	
1986 ²	169,871	116,675	22,022	8,336	8,984	11,703	6,955	21,992	10,263	26,420	
1987 ²	172,140	117,491	22,384	7,759	9,481	12,005	6,716	22,099	10,422	26,625	
1988	172,342	116,954	22,208	7,444	9,794	11,795	6,640	22,404	10,199	26,470	
1989	175,106	118,867	22,547	7,268	9,746	12,355	6,557	22,736	10,467	27,191	
1990	178,695	121,416	22,664	7,317	9,821	13,218	6,454	22,789	10,642	28,511	
1991	185,090	123,739	22,845	7,197	10,035	13,035	6,424	23,498	10,957	29,748	
1992	191,791	128,029	23,173	7,588	10,250	13,936	6,454	24,230	11,171	31,227	
1993	190,864	128,266	22,888	7,815	10,096	13,791	6,281	24,920	11,189	31,286	
1994	186,675	126,686	22,277	7,676	9,810	13,127	6,166	25,493	11,131	31,006	
1995	179,834	123,556	21,238	7,387	9,213	12,840	6,158	25,297	10,903	30,520	
1996	174,783	120,758	20,413	6,955	8,797	13,088	5,847	24,737	10,794	30,127	
1997	170,168	117,094	19,458	6,676	8,171	13,541	5,598	24,030	10,846	28,774	
1998	167,620	114,843	19,050	6,386	7,810	14,385	5,400	23,648	10,657	27,507	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	34,857	1,142	3,457	6,512	7,850	3,199	4,797	1,751	6,149	7,503	
1977	34,899	1,160	3,595	6,553	8,146	2,967	4,742	1,809	5,927	7,490	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	36,537	1,116	3,789	6,729	8,585	3,164	5,170	1,922	6,062	7,595	
1980	38,773	1,273	4,025	7,059	9,405	3,071	5,525	2,023	6,392	7,725	
1981	41,112	1,432	4,456	7,673	9,739	2,915	6,075	2,167	6,655	7,403	
1982	44,508	1,449	4,936	8,140	10,715	3,042	6,834	2,170	7,222	6,869	
1983	48,289	1,760	5,100	8,509	12,302	2,673	7,847	2,380	7,718	6,678	
1984 ²	49,120	1,768	5,002	8,648	12,775	2,769	8,137	2,518	7,503	6,675	
1985 ²	49,615	1,868	4,792	8,257	13,591	2,821	8,316	2,654	7,316	6,747	
1986 ²	53,196	2,006	4,806	8,484	14,823	3,073	9,162	2,849	7,993	6,707	
1987 ²	54,649	2,205	4,800	8,230	15,552	3,422	9,498	2,867	8,075	7,292	
1988	55,388	2,365	4,567	8,381	16,024	3,559	9,581	2,887	8,024	7,231	
1989	56,239	2,592	4,486	8,315	16,644	3,751	9,637	3,081	7,733	7,685	
1990	57,279	2,811	4,547	8,347	16,719	3,862	10,019	3,238	7,736	8,029	
1991	61,351	3,071	4,803	9,309	17,739	4,556	10,745	3,316	7,812	8,450	
1992	63,762	3,043	4,849	10,126	18,570	4,906	11,297	3,467	7,504	9,033	
1993	62,598	2,971	4,875	9,934	17,926	4,729	11,210	3,447	7,506	9,926	
1994	59,989	2,722	4,912	9,855	17,021	4,612	10,658	3,268	6,941	10,753	
1995	56,278	2,417	4,734	9,431	15,747	4,191	9,993	3,064	6,701	11,367	
1996	54,025	2,293	4,594	8,937	15,441	4,037	9,500	2,878	6,345	12,350	
1997	53,074	2,226	4,425	8,361	16,097	3,977	9,143	2,806	6,039	13,138	
1998	52,777	2,251	4,209	8,109	16,621	3,855	8,840	2,810	6,082	13,585	

¹ Master's-granting institutions were not surveyed in 1978.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 7. Female full-time graduate students in science, engineering, and health fields in all institutions,
by field: 1975-1998**

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	48,692	46,667	3,047	1,634	2,476	742	1,491	11,722	11,052	14,503	
1977	52,054	49,797	3,212	1,783	2,282	759	1,808	12,549	11,754	15,650	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	57,063	53,633	3,491	2,221	2,170	1,050	2,207	13,516	12,571	16,407	
1980	61,327	57,473	3,703	2,483	2,306	1,403	2,390	13,886	13,892	17,410	
1981	63,928	59,315	4,001	2,573	2,540	1,727	2,428	14,088	14,563	17,395	
1982	65,517	60,270	4,397	2,787	2,791	2,311	2,544	14,544	14,444	16,452	
1983	67,919	62,300	4,833	2,973	2,918	2,639	2,528	14,779	15,200	16,430	
1984 ²	68,616	62,569	5,097	2,858	2,981	2,743	2,580	15,102	15,255	15,953	
1985 ²	69,794	63,513	5,428	2,834	3,202	3,055	2,397	15,203	15,103	16,291	
1986 ²	72,955	65,985	5,740	2,913	3,404	3,317	2,386	15,817	15,992	16,416	
1987 ²	75,065	67,782	6,028	2,676	3,562	3,331	2,378	16,136	16,834	16,837	
1988	78,315	70,696	6,366	2,748	3,718	3,338	2,482	16,805	17,919	17,320	
1989	81,800	73,664	6,660	2,753	3,935	3,251	2,513	17,612	18,881	18,059	
1990	86,704	78,006	6,821	2,927	4,044	3,471	2,646	18,156	19,976	19,965	
1991	92,084	82,401	7,272	3,176	4,221	3,481	2,865	19,202	21,301	20,883	
1992	98,719	88,055	7,500	3,398	4,429	3,550	2,998	20,159	22,991	23,030	
1993	103,166	91,967	7,723	3,552	4,434	3,583	3,187	21,561	23,593	24,334	
1994	106,373	94,796	7,766	3,794	4,416	3,547	3,326	22,524	24,157	25,266	
1995	107,419	95,923	7,664	3,888	4,197	3,650	3,462	23,033	24,319	25,710	
1996	109,411	97,585	7,543	3,871	4,169	4,085	3,451	23,007	24,674	26,785	
1997	110,540	98,028	7,434	3,874	3,973	4,793	3,512	22,967	24,761	26,714	
1998	111,897	98,925	7,350	4,103	3,972	5,352	3,600	23,360	24,925	26,263	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	2,025	23	234	513	297	379	122	109	348	11,082	
1977	2,257	27	278	541	382	376	141	142	370	12,834	
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	3,430	36	429	894	454	579	258	213	567	15,151	
1980	3,854	54	465	899	558	665	316	231	666	16,258	
1981	4,613	51	533	1,126	711	688	347	287	870	16,670	
1982	5,247	73	672	1,241	818	765	433	308	937	16,006	
1983	5,619	80	769	1,295	963	615	483	324	1,090	15,921	
1984 ²	6,047	86	732	1,438	1,150	624	561	354	1,102	16,232	
1985 ²	6,281	126	754	1,492	1,208	635	559	439	1,068	16,548	
1986 ²	6,970	148	788	1,487	1,467	734	627	521	1,198	16,649	
1987 ²	7,283	167	874	1,398	1,549	734	732	569	1,260	16,569	
1988	7,619	168	792	1,565	1,682	736	835	579	1,262	17,306	
1989	8,136	180	796	1,649	1,822	907	855	639	1,288	18,128	
1990	8,698	199	896	1,781	1,956	908	848	692	1,418	19,402	
1991	9,683	254	985	2,019	2,165	1,042	942	742	1,534	21,416	
1992	10,664	263	1,097	2,328	2,426	1,175	1,086	807	1,482	23,066	
1993	11,199	291	1,166	2,524	2,444	1,173	1,185	802	1,614	25,723	
1994	11,577	278	1,193	2,786	2,391	1,298	1,217	840	1,574	28,328	
1995	11,496	276	1,223	2,817	2,440	1,151	1,135	816	1,638	30,528	
1996	11,826	283	1,315	2,854	2,548	1,091	1,190	815	1,730	31,909	
1997	12,512	303	1,359	2,907	2,830	1,098	1,289	855	1,871	33,203	
1998	12,972	314	1,392	2,937	3,169	1,087	1,233	892	1,948	34,507	

¹ Master's-granting institutions were not surveyed in 1978.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 8. Full-time graduate students with U.S. citizenship or permanent resident status in science, engineering, and health fields in all institutions, by field: 1975-1998

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 166,192	141,456	17,186	9,484	6,647	4,521	7,872	33,171	25,461	37,114		
1981 165,662	139,618	17,049	9,439	6,511	4,887	7,873	32,490	25,566	35,803		
1982 166,743	138,270	17,584	9,693	6,926	5,981	7,676	31,720	24,588	34,102		
1983 169,927	138,772	18,009	10,299	6,714	6,677	7,446	31,283	25,468	32,876		
1984 ² 169,916	137,969	18,292	10,164	6,772	6,982	7,420	31,374	24,924	32,041		
1985 ² 168,281	136,457	18,186	9,669	6,995	8,327	6,854	30,715	24,179	31,532		
1986 ² 170,447	137,217	18,264	9,382	7,243	8,912	6,743	30,663	25,085	30,925		
1987 ² 171,169	137,246	18,384	8,496	7,549	8,863	6,434	30,255	26,044	31,221		
1988 170,236	136,725	18,130	8,040	7,738	8,415	6,443	30,244	26,802	30,913		
1989 173,420	139,351	18,107	7,717	7,697	8,616	6,393	30,367	28,021	32,433		
1990 177,804	143,340	17,836	7,813	7,961	8,742	6,215	30,286	29,133	35,354		
1991 185,487	148,396	18,267	7,802	8,380	8,426	6,405	31,102	30,634	37,380		
1992 ³ 197,473	157,575	18,759	8,309	8,939	8,852	6,590	32,558	32,548	41,020		
1993 ³ 204,484	163,261	19,231	8,680	9,056	8,985	6,661	34,520	33,196	42,932		
1994 ³ 206,851	165,684	19,130	8,608	8,876	8,731	6,680	36,228	33,430	44,001		
1995 ³ 204,163	165,564	18,410	8,689	8,291	8,610	6,866	37,196	33,574	43,928		
1996 ³ 200,783	164,295	17,639	8,430	7,885	8,374	6,725	37,229	33,845	44,168		
1997 ³ 196,013	161,207	16,796	8,328	7,262	8,588	6,741	36,765	33,936	42,791		
1998 ³ 192,407	158,990	16,460	8,302	7,090	9,041	6,761	36,529	33,837	40,970		
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 24,736	759	2,500	4,670	5,666	2,297	3,211	1,147	4,486	21,950		
1981 26,044	882	2,787	5,162	5,665	2,029	3,363	1,342	4,814	21,938		
1982 28,473	945	3,267	5,428	6,421	2,190	3,767	1,297	5,158	20,586		
1983 31,155	1,088	3,630	5,544	7,398	1,933	4,327	1,530	5,705	20,201		
1984 ² 31,947	1,115	3,603	5,687	7,890	1,934	4,591	1,663	5,464	20,561		
1985 ² 31,824	1,258	3,337	5,282	8,137	1,874	4,858	1,805	5,273	20,762		
1986 ² 33,230	1,343	3,412	5,303	8,572	2,053	5,218	1,854	5,475	20,665		
1987 ² 33,923	1,559	3,353	5,090	9,002	2,145	5,559	1,829	5,386	21,103		
1988 33,511	1,502	2,957	5,208	9,295	2,227	5,299	1,805	5,218	21,485		
1989 34,069	1,757	2,668	5,097	9,723	2,426	5,632	1,890	4,876	22,527		
1990 34,464	1,870	2,668	5,375	9,652	2,374	5,781	1,985	4,759	23,875		
1991 37,091	2,201	2,798	6,140	9,976	2,760	6,120	2,067	5,029	26,105		
1992 ³ 39,898	2,246	2,948	7,003	10,577	3,076	6,803	2,247	4,998	28,406		
1993 ³ 41,223	2,178	3,107	7,440	10,428	3,209	7,228	2,264	5,369	31,832		
1994 ³ 41,167	1,862	3,370	7,848	10,467	3,180	7,090	2,335	5,015	35,448		
1995 ³ 38,599	1,611	3,304	7,652	9,382	2,863	6,548	2,158	5,081	38,268		
1996 ³ 36,488	1,417	3,368	7,509	8,714	2,512	6,024	1,961	4,983	40,289		
1997 ³ 34,806	1,327	3,263	7,011	8,516	2,398	5,591	1,894	4,806	42,349		
1998 ³ 33,417	1,268	3,044	6,811	8,153	2,237	5,212	1,867	4,825	44,083		

¹ Distribution by citizenship data were not requested before 1980.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

³ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 9. Full-time graduate students without U.S. citizenship or permanent resident status in science, engineering, and health fields in all institutions, by field: 1975-1998

Year	Total, science and engi- neering	Sciences									Health fields
		Sciences, total	Physical sciences	Earth, atmos- pheric, & ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences	
1975 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980	48,273	30,382	5,731	1,387	3,254	2,066	2,296	4,519	1,210	9,919	
1981	52,341	32,660	6,258	1,495	3,641	2,558	2,439	4,787	1,004	10,478	
1982	55,178	33,896	6,454	1,626	3,887	3,190	2,460	4,968	1,079	10,232	
1983	59,529	36,776	7,195	1,669	4,241	3,923	2,530	5,457	1,093	10,668	
1984 ²	61,099	37,879	7,560	1,570	4,537	4,454	2,488	5,740	1,045	10,485	
1985 ²	65,711	41,639	8,483	1,665	4,821	5,534	2,396	6,286	1,156	11,298	
1986 ²	72,379	45,443	9,498	1,867	5,145	6,108	2,598	7,146	1,170	11,911	
1987 ²	76,036	48,027	10,028	1,939	5,494	6,473	2,660	7,980	1,212	12,241	
1988	80,421	50,925	10,444	2,152	5,774	6,718	2,679	8,965	1,316	12,877	
1989	83,486	53,180	11,100	2,304	5,984	6,990	2,677	9,981	1,327	12,817	
1990	87,595	56,082	11,649	2,431	5,904	7,947	2,885	10,659	1,485	13,122	
1991	91,687	57,744	11,850	2,571	5,876	8,090	2,884	11,598	1,624	13,251	
1992 ³	93,037	58,509	11,914	2,677	5,740	8,634	2,862	11,831	1,614	13,237	
1993 ³	89,546	56,972	11,380	2,687	5,474	8,389	2,807	11,961	1,586	12,688	
1994 ³	86,197	55,798	10,913	2,862	5,350	7,943	2,812	11,789	1,858	12,271	
1995 ³	83,090	53,915	10,492	2,586	5,119	7,880	2,754	11,134	1,648	12,302	
1996 ³	83,411	54,048	10,317	2,396	5,081	8,799	2,573	10,515	1,623	12,744	
1997 ³	84,695	53,915	10,096	2,222	4,882	9,746	2,369	10,232	1,671	12,697	
1998 ³	87,110	54,778	9,940	2,187	4,692	10,696	2,239	10,479	1,745	12,800	
Engineering											
Engi- neering, total	Aerospace engineering	Chemical engineering	Civil engi- neering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallur- gical & materials engineering	Other engi- neering			
1975 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980	17,891	568	1,990	3,288	4,297	1,439	2,630	1,107	2,572	2,033	
1981	19,681	601	2,202	3,637	4,785	1,574	3,059	1,112	2,711	2,135	
1982	21,282	577	2,341	3,953	5,112	1,617	3,500	1,181	3,001	2,289	
1983	22,753	752	2,239	4,260	5,867	1,355	4,003	1,174	3,103	2,398	
1984 ²	23,220	739	2,131	4,399	6,035	1,459	4,107	1,209	3,141	2,346	
1985 ²	24,072	736	2,209	4,467	6,662	1,582	4,017	1,288	3,111	2,533	
1986 ²	26,936	811	2,182	4,668	7,718	1,754	4,571	1,516	3,716	2,691	
1987 ²	28,009	813	2,321	4,538	8,099	2,011	4,671	1,607	3,949	2,758	
1988	29,496	1,031	2,402	4,738	8,411	2,068	5,117	1,661	4,068	3,052	
1989	30,306	1,015	2,614	4,867	8,743	2,232	4,860	1,830	4,145	3,286	
1990	31,513	1,140	2,775	4,753	9,023	2,396	5,086	1,945	4,395	3,556	
1991	33,943	1,124	2,990	5,188	9,928	2,838	5,567	1,991	4,317	3,761	
1992 ³	34,528	1,060	2,998	5,451	10,419	3,005	5,580	2,027	3,988	3,693	
1993 ³	32,574	1,084	2,934	5,018	9,942	2,693	5,167	1,985	3,751	3,817	
1994 ³	30,399	1,138	2,735	4,793	8,945	2,730	4,785	1,773	3,500	3,633	
1995 ³	29,175	1,082	2,653	4,596	8,805	2,479	4,580	1,722	3,258	3,627	
1996 ³	29,363	1,159	2,541	4,282	9,275	2,616	4,666	1,732	3,092	3,970	
1997 ³	30,780	1,202	2,521	4,257	10,411	2,677	4,841	1,767	3,104	3,992	
1998 ³	32,332	1,297	2,557	4,235	11,637	2,705	4,861	1,835	3,205	4,009	

¹ Distribution by citizenship data were not requested before 1980.

² These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

³ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens.

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 10. Graduate students in science, engineering, and health fields in all institutions,
by detailed field: 1991-1998**

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Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	471,262	493,632	504,449	504,542	499,732	494,219	487,371	485,754
Total, science and engineering fields	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Sciences, total	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Physical sciences, total	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Astronomy	829	869	880	973	912	874	778	820
Chemistry	19,407	19,929	20,131	19,797	19,594	19,358	18,794	18,454
Physics	14,081	14,122	13,841	13,162	12,425	11,728	11,147	10,809
Physical sciences, n.e.c.	393	428	466	517	486	395	389	482
Earth, atmos., & ocean sci., total	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Atmospheric sciences	968	1,089	1,112	1,109	1,072	1,086	1,092	965
Geosciences	7,567	7,744	7,785	7,741	7,608	7,323	6,997	6,705
Oceanography	2,386	2,530	2,611	2,853	2,703	2,598	2,458	2,545
Earth, atmos., & ocean sci., n.e.c.	3,559	3,984	4,297	4,339	4,422	4,273	4,097	4,149
Mathematical sciences, total	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Mathematics & applied mathematics	17,206	17,404	16,945	16,463	15,400	14,970	14,048	13,816
Statistics	2,746	2,951	3,055	3,116	3,109	3,045	2,681	2,647
Computer sciences	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Agricultural sciences	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Biological sciences, total	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Anatomy	1,051	1,030	1,027	1,079	1,056	1,111	1,094	1,015
Biochemistry	5,201	5,376	5,513	5,632	5,550	5,265	5,093	5,138
Biology	13,292	13,874	14,327	14,220	14,284	14,635	14,643	14,257
Biometry/epidemiology	2,032	2,365	2,658	2,710	2,812	3,001	2,900	3,484
Biophysics	697	751	780	794	845	833	748	737
Botany	2,694	2,689	2,714	2,748	2,609	2,504	2,402	2,328
Cell biology	2,809	3,093	3,374	3,768	3,890	3,896	3,981	4,079
Ecology	1,180	1,301	1,410	1,566	1,680	1,615	1,659	1,696
Entomology/parasitology	1,171	1,193	1,247	1,263	1,241	1,234	1,161	1,168
Genetics	1,520	1,639	1,785	1,699	1,700	1,729	1,760	1,705
Microbio., immunology, & virology	4,928	4,972	5,068	5,141	5,072	4,963	4,854	4,824
Nutrition	4,164	4,159	4,388	4,747	5,016	4,859	4,550	4,431
Pathology	1,449	1,456	1,575	1,707	1,670	1,656	1,674	1,580
Pharmacology	2,432	2,529	2,645	2,830	2,700	2,652	2,582	2,713
Physiology	2,332	2,317	2,372	2,378	2,540	2,377	2,298	2,169
Zoology	2,191	2,139	2,120	2,092	2,068	1,911	1,730	1,676
Biosciences, n.e.c.	2,635	3,294	3,449	3,769	4,003	3,887	4,006	4,060
Psychology, total	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Psychology, general	19,555	18,802	18,887	18,297	17,666	16,894	17,350	17,559
Clinical psychology	10,834	12,090	12,526	12,684	12,519	12,787	13,008	12,839
Psychology, n.e.c.	20,954	22,592	23,144	23,573	23,456	23,528	22,849	22,657
Social sciences, total	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Agricultural economics	2,364	2,522	2,415	2,289	2,338	2,117	2,043	1,995
Anthropology (cultural & social)	6,731	7,123	7,361	7,665	7,693	7,773	7,560	7,577
Economics (except agricultural)	12,707	13,252	13,214	12,913	12,673	12,080	11,097	10,699
Geography	3,760	4,102	4,378	4,502	4,371	4,331	4,287	4,325
History and philosophy of science	337	360	369	387	401	409	443	518
Linguistics	3,425	3,277	3,321	3,279	3,194	3,156	3,008	2,883
Political science	31,707	33,797	35,076	34,317	34,298	33,252	32,083	30,680
Sociology	8,393	9,011	9,425	9,498	9,564	9,425	9,413	9,098
Sociology/anthropology	899	979	935	987	941	923	948	857
Social sciences, n.e.c.	10,419	11,355	12,299	13,297	13,976	15,181	15,141	15,193
Engineering, total	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Aerospace engineering	4,120	4,036	3,940	3,715	3,343	3,208	3,083	3,137
Agricultural engineering	983	1,008	1,018	1,061	1,037	1,012	941	925
Biomedical engineering	2,239	2,537	2,675	2,750	2,732	2,732	2,847	2,905
Chemical engineering	7,127	7,397	7,516	7,608	7,424	7,373	7,247	7,060
Civil engineering	17,398	19,572	19,583	19,925	19,218	18,528	17,049	16,374
Electrical engineering	35,182	36,460	35,314	33,050	30,747	29,736	30,618	31,398
Engineering science	2,154	2,218	2,180	2,089	1,955	1,751	1,647	1,701
Industrial/manufacturing eng.	12,676	13,525	13,596	13,661	13,143	12,399	11,736	11,059
Mechanical engineering	17,730	18,637	18,477	17,761	16,363	15,509	15,045	14,696
Metallurgical/materials eng.	5,160	5,512	5,363	5,191	4,920	4,713	4,649	4,644
Mining engineering	489	437	427	424	373	371	348	304
Nuclear engineering	1,282	1,286	1,306	1,246	1,154	980	868	821
Petroleum engineering	705	737	725	624	610	562	561	571
Engineering, n.e.c.	6,331	4,673	4,738	3,918	4,180	4,349	4,394	4,692

See explanatory information, if any, and SOURCE at end of table.

**Table 10. Graduate students in science, engineering, and health fields in all institutions,
by detailed field: 1991-1998**

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Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields	58,565	62,988	68,563	73,291	77,177	78,856	79,682	80,474
Medical fields, total	11,707	12,594	14,184	15,027	15,521	15,320	15,404	16,341
Anesthesiology	529	708	719	729	749	754	840	907
Cardiology	2	8	11	14	19	18	48	51
Oncology/cancer research	156	197	209	208	189	185	198	209
Endocrinology	66	71	63	63	53	46	43	58
Gastroenterology	0	0	1	0	0	0	3	6
Hematology	4	5	3	2	1	3	3	1
Neurology	1,003	1,149	1,311	1,455	1,554	1,632	1,696	1,765
Obstetrics and gynecology	10	3	3	4	6	4	18	13
Ophthalmology	32	27	19	32	30	33	33	38
Otorhinolaryngology	3	0	1	2	0	0	2	0
Pediatrics	153	154	196	261	238	275	342	314
Preventive medicine/community health	8,423	8,737	9,976	10,459	10,858	10,543	10,306	11,142
Psychiatry	104	147	172	225	249	218	228	136
Pulmonary disease	0	0	0	0	0	0	0	0
Radiology	233	252	287	320	314	285	267	249
Surgery	69	76	82	119	174	167	221	174
Clinical medicine, n.e.c.	920	1,060	1,131	1,134	1,087	1,157	1,156	1,278
Other health fields, total	46,858	50,394	54,379	58,264	61,656	63,536	64,278	64,133
Dental sciences	1,016	1,121	1,135	1,199	1,251	1,291	1,411	1,471
Nursing	22,012	23,213	24,781	26,997	28,405	27,388	26,861	25,499
Pharmaceutical sciences	2,968	2,804	2,871	2,901	2,948	2,975	3,050	3,407
Speech pathology/audiology	8,945	9,791	10,740	11,473	12,092	12,973	13,320	13,315
Veterinary sciences	894	942	877	875	929	946	1,175	1,192
Health related, n.e.c.	11,023	12,523	13,975	14,819	16,031	17,963	18,461	19,249

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 11. Male graduate students in science, engineering, and health fields in all institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	284,898	294,234	294,502	288,373	279,406	271,738	264,528	261,240
Total, science and engineering fields	271,845	280,397	279,289	272,120	262,341	253,629	245,643	241,828
Sciences, total	173,984	179,595	180,123	177,146	173,156	168,658	163,336	160,615
Physical sciences, total	26,146	26,504	26,116	25,290	24,327	23,303	22,257	21,831
Astronomy	657	683	682	750	689	647	570	590
Chemistry	13,145	13,367	13,279	12,956	12,759	12,511	12,066	11,911
Physics	12,101	12,179	11,865	11,254	10,590	9,919	9,403	9,029
Physical sciences, n.e.c.	243	275	290	330	289	226	218	301
Earth, atmos., & ocean sci., total	10,025	10,489	10,745	10,689	10,336	9,786	9,187	8,733
Atmospheric sciences	778	848	887	867	835	852	829	731
Geosciences	5,559	5,667	5,675	5,506	5,310	4,991	4,686	4,379
Oceanography	1,540	1,571	1,607	1,746	1,609	1,539	1,415	1,393
Earth, atmos., & ocean sci., n.e.c.	2,148	2,403	2,576	2,570	2,582	2,404	2,257	2,230
Mathematical sciences	13,654	13,806	13,362	13,044	12,248	11,794	10,857	10,483
Computer sciences	26,340	27,838	27,767	26,043	25,306	25,802	26,123	27,206
Agricultural sciences	7,939	8,059	7,826	7,911	7,935	7,502	7,280	7,112
Biological sciences, total	27,643	28,702	29,399	29,988	29,890	29,360	28,513	28,003
Anatomy	550	537	534	554	549	586	580	551
Biochemistry	3,070	3,158	3,182	3,250	3,143	2,982	2,922	2,913
Biology	7,080	7,295	7,520	7,476	7,395	7,511	7,370	7,070
Biometry/epidemiology	920	1,037	1,132	1,124	1,139	1,227	1,119	1,343
Biophysics	515	549	554	576	604	589	532	528
Botany	1,627	1,635	1,620	1,584	1,465	1,394	1,283	1,210
Cell biology	1,528	1,687	1,802	2,038	2,097	2,071	2,091	2,091
Ecology	662	712	746	821	906	847	867	862
Entomology/parasitology	830	839	847	846	827	810	751	754
Genetics	761	797	853	787	818	828	801	735
Microbio., immunology, & virology	2,576	2,606	2,600	2,632	2,591	2,506	2,431	2,428
Nutrition	1,244	1,208	1,244	1,267	1,287	1,231	1,138	1,069
Pathology	825	809	834	925	890	847	842	776
Pharmacology	1,302	1,348	1,404	1,484	1,395	1,366	1,362	1,398
Physiology	1,366	1,366	1,389	1,392	1,482	1,396	1,364	1,275
Zoology	1,307	1,311	1,260	1,216	1,202	1,091	974	941
Biosciences, n.e.c.	1,480	1,808	1,878	2,016	2,100	2,078	2,086	2,059
Psychology	16,556	16,650	16,567	16,416	15,877	15,403	15,528	15,314
Social sciences, total	45,681	47,547	48,341	47,765	47,237	45,708	43,591	41,933
Agricultural economics	1,728	1,810	1,665	1,541	1,555	1,407	1,355	1,315
Anthropology (cultural & social)	2,778	2,876	2,969	3,072	3,140	3,087	3,059	3,021
Economics (except agricultural)	9,148	9,450	9,358	9,120	8,797	8,297	7,585	7,239
Geography	2,442	2,671	2,796	2,904	2,786	2,770	2,662	
Linguistics	1,512	1,281	1,301	1,213	1,194	1,133	1,034	976
Political science	17,971	18,826	19,320	18,733	18,348	17,620	16,679	15,833
Sociology	3,781	3,861	3,857	3,758	3,781	3,640	3,591	3,366
Sociology/anthropology	410	445	423	396	387	382	377	335
Social sciences, other	5,911	6,327	6,652	7,028	7,249	7,372	7,249	7,186
Engineering, total	97,861	100,802	99,166	94,974	89,185	84,971	82,307	81,213
Aerospace engineering	3,793	3,688	3,583	3,357	2,992	2,856	2,712	2,755
Agricultural engineering	858	864	867	861	835	802	723	682
Biomedical engineering	1,651	1,920	1,977	2,053	2,006	1,999	2,021	2,035
Chemical engineering	5,870	6,003	6,017	6,082	5,863	5,731	5,538	5,339
Civil engineering	14,296	15,918	15,725	15,714	14,986	14,228	12,889	12,294
Electrical engineering	31,311	32,167	30,992	28,946	26,652	25,607	26,159	26,562
Engineering science	1,866	1,913	1,876	1,783	1,658	1,456	1,369	1,370
Industrial/manufacturing eng.	10,321	10,870	11,003	10,866	10,388	9,685	9,125	8,664
Mechanical engineering	16,219	16,939	16,703	15,938	14,686	13,873	13,266	12,934
Metallurgical/materials eng.	4,173	4,443	4,336	4,122	3,861	3,653	3,555	3,529
Nuclear engineering	1,105	1,100	1,121	1,093	1,009	827	725	687
Engineering, other	6,398	4,977	4,966	4,159	4,249	4,254	4,225	4,362
Total, health fields	13,053	13,837	15,213	16,253	17,065	18,109	18,885	19,412
Clinical fields	1,150	1,289	1,353	1,373	1,348	1,407	1,552	1,611
Dental sciences	717	772	786	819	819	831	881	919
Nursing	1,128	1,168	1,285	1,506	1,661	1,765	2,036	2,129
Pharmaceutical sciences	1,729	1,621	1,592	1,591	1,602	1,564	1,526	1,690
Preventive medicine/community health	3,265	3,334	3,892	4,108	4,198	4,249	4,100	4,069
Speech pathology/audiology	708	777	856	935	983	1,042	1,075	1,094
Veterinary sciences	528	536	470	467	490	505	586	564
Other health fields	3,828	4,340	4,979	5,454	5,964	6,746	7,129	7,336

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 12. Female graduate students in science, engineering, and health fields in all institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	186,364	199,398	209,947	216,169	220,326	222,481	222,843	224,514
Total, science and engineering fields	140,852	150,247	156,597	159,131	160,214	161,734	162,046	163,452
Sciences, total	125,137	133,014	138,905	141,082	142,200	143,482	143,320	144,378
Physical sciences, total	8,564	8,844	9,202	9,159	9,090	9,052	8,851	8,734
Astronomy	172	186	198	223	223	227	208	230
Chemistry	6,262	6,562	6,852	6,841	6,835	6,847	6,728	6,543
Physics	1,980	1,943	1,976	1,908	1,835	1,809	1,744	1,780
Physical sciences, n.e.c.	150	153	176	187	197	169	171	181
Earth, atmos., & ocean sci., total	4,455	4,858	5,060	5,353	5,469	5,494	5,457	5,631
Atmospheric sciences	190	241	225	242	237	234	263	234
Geosciences	2,008	2,077	2,110	2,235	2,298	2,332	2,311	2,326
Oceanography	846	959	1,004	1,107	1,094	1,059	1,043	1,152
Earth, atmos., & ocean sci., n.e.c.	1,411	1,581	1,721	1,769	1,840	1,869	1,840	1,919
Mathematical sciences	6,298	6,549	6,638	6,535	6,261	6,221	5,872	5,980
Computer sciences	8,270	8,455	8,422	8,085	8,126	8,790	9,873	10,644
Agricultural sciences	3,567	3,768	4,088	4,288	4,432	4,412	4,534	4,699
Biological sciences, total	24,135	25,475	27,053	28,155	28,846	28,768	28,622	29,057
Anatomy	501	493	493	525	507	525	514	464
Biochemistry	2,131	2,218	2,331	2,382	2,407	2,283	2,171	2,225
Biology	6,212	6,579	6,807	6,744	6,889	7,124	7,273	7,187
Biometry/epidemiology	1,112	1,328	1,526	1,586	1,673	1,774	1,781	2,141
Biophysics	182	202	226	218	241	244	216	209
Botany	1,067	1,054	1,094	1,164	1,144	1,110	1,119	1,118
Cell biology	1,281	1,406	1,572	1,730	1,793	1,825	1,890	1,988
Ecology	518	589	664	745	774	768	792	834
Entomology/parasitology	341	354	400	417	414	424	410	414
Genetics	759	842	932	912	882	901	959	970
Microbio., immunology, & virology	2,352	2,366	2,468	2,509	2,481	2,457	2,423	2,396
Nutrition	2,920	2,951	3,144	3,480	3,729	3,628	3,412	3,362
Pathology	624	647	741	782	780	809	832	804
Pharmacology	1,130	1,181	1,241	1,346	1,305	1,286	1,220	1,315
Physiology	966	951	983	986	1,058	981	934	894
Zoology	884	828	860	876	866	820	756	735
Biosciences, n.e.c.	1,155	1,486	1,571	1,753	1,903	1,809	1,920	2,001
Psychology	34,787	36,834	37,990	38,138	37,764	37,806	37,679	37,741
Social sciences, total	35,061	38,231	40,452	41,369	42,212	42,939	42,432	41,892
Agricultural economics	636	712	750	748	783	710	688	680
Anthropology (cultural & social)	3,953	4,247	4,392	4,593	4,553	4,686	4,501	4,556
Economics (except agricultural)	3,559	3,802	3,856	3,793	3,876	3,783	3,512	3,460
Geography	1,318	1,431	1,582	1,598	1,585	1,561	1,625	1,663
Linguistics	1,913	1,996	2,020	2,066	2,000	2,023	1,974	1,907
Political science	13,736	14,971	15,756	15,584	15,950	15,632	15,404	14,847
Sociology	4,612	5,150	5,568	5,740	5,783	5,785	5,822	5,732
Sociology/anthropology	489	534	512	591	554	541	571	522
Social sciences, other	4,845	5,388	6,016	6,656	7,128	8,218	8,335	8,525
Engineering, total	15,715	17,233	17,692	18,049	18,014	18,252	18,726	19,074
Aerospace engineering	327	348	357	358	351	352	371	382
Agricultural engineering	125	144	151	200	202	210	218	243
Biomedical engineering	588	617	698	697	726	733	826	870
Chemical engineering	1,257	1,394	1,499	1,526	1,561	1,642	1,709	1,721
Civil engineering	3,102	3,654	3,858	4,211	4,232	4,300	4,160	4,080
Electrical engineering	3,871	4,293	4,322	4,104	4,095	4,129	4,459	4,836
Engineering science	288	305	304	306	297	295	278	331
Industrial/manufacturing eng.	2,355	2,655	2,593	2,795	2,755	2,714	2,611	2,395
Mechanical engineering	1,511	1,698	1,774	1,823	1,677	1,636	1,779	1,762
Metallurgical/materials eng.	987	1,069	1,027	1,069	1,059	1,060	1,094	1,115
Nuclear engineering	177	186	185	153	145	153	143	134
Engineering, other	1,127	870	924	807	914	1,028	1,078	1,205
Total, health fields	45,512	49,151	53,350	57,038	60,112	60,747	60,797	61,062
Clinical fields	1,131	1,419	1,544	1,740	1,761	1,738	1,850	1,823
Dental sciences	299	349	349	380	432	460	530	552
Nursing	20,884	22,045	23,496	25,491	26,744	25,623	24,825	23,370
Pharmaceutical sciences	1,239	1,183	1,279	1,310	1,346	1,411	1,524	1,717
Preventive medicine/community health	5,158	5,403	6,084	6,351	6,660	6,294	6,206	7,073
Speech pathology/audiology	8,237	9,014	9,884	10,538	11,109	11,931	12,245	12,221
Veterinary sciences	366	406	407	408	439	441	589	628
Other health fields	8,198	9,332	10,307	10,820	11,621	12,849	13,028	13,678

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998

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Field, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Total, all surveyed fields	471,262	493,632	504,449	504,542	499,732	494,219	487,371	485,754
Total U.S. citizens or permanent residents	358,073	379,704	394,115	397,984	396,838	391,228	383,510	378,705
Black, non-Hispanic	16,407	18,487	20,439	21,177	22,154	22,976	23,571	24,249
American Indian/Alaskan Native	1,365	1,515	1,606	1,725	1,857	1,907	1,969	2,050
Asian/Pacific Islander	20,059	23,966	26,849	29,616	29,361	29,943	30,328	31,709
Hispanic	13,053	14,625	16,052	15,967	17,264	17,834	18,151	18,879
White, non-Hispanic	288,813	302,169	309,257	311,987	304,438	297,159	286,560	279,041
Other or unknown	18,376	18,942	19,912	17,512	21,764	21,409	22,931	22,777
Students with temporary visas	113,189	113,928	110,334	106,558	102,894	102,991	103,861	107,049
Total, science and engineering	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Total U.S. citizens or permanent residents	304,063	321,182	330,169	329,095	324,017	317,209	308,725	303,304
Black, non-Hispanic	13,691	15,445	17,118	17,611	18,283	19,071	19,352	19,653
American Indian/Alaskan Native	1,120	1,243	1,309	1,383	1,516	1,539	1,600	1,614
Asian/Pacific Islander	18,136	21,752	24,059	26,474	25,901	25,947	25,973	26,844
Hispanic	11,045	12,246	13,381	13,281	14,117	14,638	15,004	15,595
White, non-Hispanic	243,602	253,435	256,859	255,719	245,889	238,077	227,992	220,700
Other or unknown	16,469	17,061	17,443	14,627	18,311	17,937	18,804	18,898
Students with temporary visas	108,634	109,462	105,717	102,156	98,538	98,154	98,964	101,976
Sciences, total	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Total U.S. citizens or permanent residents	231,830	244,587	252,578	253,056	252,285	249,015	244,162	241,062
Black, non-Hispanic	11,666	13,071	14,559	14,827	15,427	16,176	16,477	16,826
American Indian/Alaskan Native	935	1,066	1,098	1,141	1,285	1,305	1,361	1,377
Asian/Pacific Islander	11,020	13,260	15,072	16,697	16,893	17,510	17,872	18,784
Hispanic	8,921	9,783	10,687	10,420	11,309	11,703	12,193	12,683
White, non-Hispanic	188,818	196,039	199,419	199,699	193,933	188,965	181,931	176,709
Other or unknown	10,470	11,368	11,743	10,272	13,438	13,356	14,328	14,683
Students with temporary visas	67,291	68,022	66,450	65,172	63,071	63,125	62,494	63,931
Physical sciences	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Total U.S. citizens or permanent residents	21,985	22,543	23,066	22,740	21,992	21,159	20,194	19,812
Black, non-Hispanic	699	807	843	856	897	986	952	910
American Indian/Alaskan Native	62	67	81	67	76	60	70	64
Asian/Pacific Islander	1,429	1,615	1,973	1,923	1,780	1,743	1,638	1,760
Hispanic	649	680	747	675	732	743	784	831
White, non-Hispanic	18,402	18,527	18,582	18,422	17,487	16,762	15,749	15,197
Other or unknown	744	847	840	797	1,020	865	1,001	1,050
Students with temporary visas	12,725	12,805	12,252	11,709	11,425	11,196	10,914	10,753
Earth, atmospheric, & ocean sciences	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Total U.S. citizens or permanent residents	11,583	12,343	12,795	12,776	12,858	12,513	12,128	11,862
Black, non-Hispanic	141	202	227	203	219	223	206	206
American Indian/Alaskan Native	29	35	46	49	53	65	82	85
Asian/Pacific Islander	267	383	469	454	425	411	417	425
Hispanic	250	308	371	344	366	381	407	390
White, non-Hispanic	10,531	10,893	11,145	11,351	11,322	10,956	10,486	10,175
Other or unknown	365	522	537	375	473	477	530	581
Students with temporary visas	2,897	3,004	3,010	3,266	2,947	2,767	2,516	2,502
Mathematical sciences	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Total U.S. citizens or permanent residents	13,318	13,878	13,866	13,516	12,700	12,254	11,185	11,048
Black, non-Hispanic	524	579	710	673	689	711	657	613
American Indian/Alaskan Native	20	27	32	36	70	41	43	34
Asian/Pacific Islander	866	963	1,020	1,208	1,121	1,225	1,052	1,174
Hispanic	349	376	415	369	400	425	427	454
White, non-Hispanic	10,457	10,851	10,572	10,496	9,659	9,201	8,360	8,081
Other or unknown	1,102	1,082	1,117	734	761	651	646	692
Students with temporary visas	6,634	6,477	6,134	6,063	5,809	5,761	5,544	5,415
Computer sciences	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Total U.S. citizens or permanent residents	22,988	24,163	24,269	23,064	22,638	22,737	23,088	23,693
Black, non-Hispanic	1,093	1,108	1,168	1,182	1,155	1,278	1,302	1,352
American Indian/Alaskan Native	42	72	68	43	55	53	60	93
Asian/Pacific Islander	2,858	3,399	3,566	4,056	4,053	4,269	4,632	5,278
Hispanic	631	706	696	633	664	701	723	754
White, non-Hispanic	16,464	16,893	16,760	15,709	14,739	14,443	14,045	13,937
Other or unknown	1,900	1,985	2,011	1,441	1,972	1,993	2,326	2,279
Students with temporary visas	11,622	12,130	11,920	11,064	10,794	11,855	12,908	14,157

See explanatory information, if any, and SOURCE at end of table.

Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998

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Field, citizenship, and racial/ethnic background	1991	1992 1	1993 1	1994 1	1995 1	1996 1	1997 1	1998 1
Agricultural sciences	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Total U.S. citizens or permanent residents	8,298	8,649	8,778	9,060	9,270	8,966	9,089	9,217
Black, non-Hispanic	145	209	235	239	294	268	229	310
American Indian/Alaskan Native	31	39	34	37	59	49	62	69
Asian/Pacific Islander	225	215	264	276	274	281	302	304
Hispanic	279	279	308	263	288	367	400	383
White, non-Hispanic	7,481	7,679	7,731	7,972	7,978	7,732	7,749	7,857
Other or unknown	137	228	206	273	377	269	347	294
Students with temporary visas	3,208	3,178	3,136	3,139	3,097	2,948	2,725	2,594
Biological sciences	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Total U.S. citizens or permanent residents	39,282	41,358	43,525	45,314	46,528	46,638	45,971	45,628
Black, non-Hispanic	1,317	1,493	1,737	1,709	1,879	2,010	2,171	2,186
American Indian/Alaskan Native	129	141	157	183	205	200	198	192
Asian/Pacific Islander	2,346	2,822	3,456	3,953	4,299	4,464	4,480	4,426
Hispanic	1,374	1,459	1,649	1,651	1,823	1,847	1,983	2,057
White, non-Hispanic	33,058	34,229	35,094	36,389	36,509	36,327	35,041	34,553
Other or unknown	1,058	1,214	1,432	1,429	1,813	1,790	2,098	2,214
Students with temporary visas	12,496	12,819	12,927	12,829	12,208	11,490	11,164	11,432
Psychology	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Total U.S. citizens or permanent residents	49,355	51,551	52,676	52,211	51,554	51,236	51,198	50,861
Black, non-Hispanic	2,455	2,758	3,284	3,529	3,359	3,455	3,647	3,845
American Indian/Alaskan Native	252	290	289	317	330	359	341	315
Asian/Pacific Islander	1,040	1,278	1,470	1,583	1,598	1,776	1,909	2,038
Hispanic	2,365	2,371	2,562	2,485	2,799	3,002	3,098	3,315
White, non-Hispanic	40,990	42,426	42,662	42,062	40,146	39,327	38,724	37,886
Other or unknown	2,253	2,428	2,409	2,235	3,322	3,317	3,479	3,462
Students with temporary visas	1,988	1,933	1,881	2,343	2,087	1,973	2,009	2,194
Social sciences	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Total U.S. citizens or permanent residents	65,021	70,102	73,603	74,375	74,745	73,512	71,309	68,941
Black, non-Hispanic	5,292	5,915	6,355	6,436	6,935	7,245	7,313	7,404
American Indian/Alaskan Native	370	395	391	409	437	478	505	525
Asian/Pacific Islander	1,989	2,585	2,854	3,244	3,343	3,341	3,442	3,379
Hispanic	3,024	3,604	3,939	4,000	4,237	4,237	4,371	4,499
White, non-Hispanic	51,435	54,541	56,873	57,298	56,093	54,217	51,777	49,023
Other or unknown	2,911	3,062	3,191	2,988	3,700	3,994	3,901	4,111
Students with temporary visas	15,721	15,676	15,190	14,759	14,704	15,135	14,714	14,884
Engineering, total	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Total U.S. citizens or permanent residents	72,233	76,595	77,591	76,039	71,732	68,194	64,563	62,242
Black, non-Hispanic	2,025	2,374	2,559	2,784	2,856	2,895	2,875	2,827
American Indian/Alaskan Native	185	177	211	242	231	234	239	237
Asian/Pacific Islander	7,116	8,492	8,987	9,777	9,008	8,437	8,101	8,060
Hispanic	2,124	2,463	2,694	2,861	2,808	2,935	2,811	2,912
White, non-Hispanic	54,784	57,396	57,440	56,020	51,956	49,112	46,061	43,991
Other or unknown	5,999	5,693	5,700	4,355	4,873	4,581	4,476	4,215
Students with temporary visas	41,343	41,440	39,267	36,984	35,467	35,029	36,470	38,045
Chemical engineering	7,127	7,397	7,516	7,608	7,424	7,373	7,247	7,060
Total U.S. citizens or permanent residents	3,939	4,122	4,348	4,601	4,473	4,505	4,403	4,189
Black, non-Hispanic	119	144	159	157	174	189	170	185
American Indian/Alaskan Native	22	15	14	18	21	30	18	21
Asian/Pacific Islander	399	379	461	524	458	482	512	469
Hispanic	159	176	180	171	202	200	142	179
White, non-Hispanic	3,140	3,236	3,388	3,521	3,420	3,381	3,346	3,105
Other or unknown	100	172	146	210	198	223	215	230
Students with temporary visas	3,188	3,275	3,168	3,007	2,951	2,868	2,844	2,871
Civil engineering	17,398	19,572	19,583	19,925	19,218	18,528	17,049	16,374
Total U.S. citizens or permanent residents	10,854	12,734	13,299	13,967	13,559	13,263	12,015	11,462
Black, non-Hispanic	279	343	393	424	471	491	443	410
American Indian/Alaskan Native	34	31	43	38	42	48	58	43
Asian/Pacific Islander	837	1,043	1,167	1,339	1,322	1,254	1,047	1,094
Hispanic	383	478	550	551	593	712	693	722
White, non-Hispanic	8,684	10,196	10,415	11,029	10,434	9,983	9,147	8,584
Other or unknown	637	643	731	586	697	775	627	609
Students with temporary visas	6,544	6,838	6,284	5,958	5,659	5,265	5,034	4,912

See explanatory information, if any, and SOURCE at end of table.

Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998

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Field, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Electrical engineering	35,182	36,460	35,314	33,050	30,747	29,736	30,618	31,398
Total U.S. citizens or permanent residents	22,366	23,627	22,874	21,644	19,529	18,374	17,943	17,348
Black, non-Hispanic	669	771	863	861	821	775	869	868
American Indian/Alaskan Native	39	38	45	53	52	51	46	33
Asian/Pacific Islander	3,026	3,755	3,737	4,088	3,697	3,540	3,481	3,509
Hispanic	661	748	841	853	784	792	810	815
White, non-Hispanic	15,571	15,996	15,650	14,336	12,640	11,769	11,113	10,622
Other or unknown	2,400	2,319	1,738	1,453	1,535	1,447	1,624	1,501
Students with temporary visas	12,816	12,833	12,440	11,406	11,218	11,362	12,675	14,050
Industrial engineering	12,676	13,525	13,596	13,661	13,143	12,399	11,736	11,059
Total U.S. citizens or permanent residents	8,902	9,682	10,153	10,095	9,819	9,102	8,396	7,671
Black, non-Hispanic	384	444	440	507	527	521	478	455
American Indian/Alaskan Native	39	42	36	23	23	21	23	30
Asian/Pacific Islander	586	794	863	852	837	737	708	595
Hispanic	253	297	332	375	374	410	391	355
White, non-Hispanic	7,016	7,375	7,448	7,483	7,025	6,676	6,227	5,643
Other or unknown	624	730	1,034	855	1,033	737	569	593
Students with temporary visas	3,774	3,843	3,443	3,566	3,324	3,297	3,340	3,388
Mechanical engineering	17,730	18,637	18,477	17,761	16,363	15,509	15,045	14,696
Total U.S. citizens or permanent residents	11,056	11,875	12,199	11,940	10,905	10,026	9,351	9,046
Black, non-Hispanic	246	320	336	398	403	417	428	412
American Indian/Alaskan Native	21	24	30	54	44	35	35	25
Asian/Pacific Islander	985	1,179	1,307	1,421	1,225	1,073	947	973
Hispanic	338	394	382	453	422	383	360	389
White, non-Hispanic	8,416	9,035	9,029	8,893	8,059	7,461	6,979	6,636
Other or unknown	1,050	923	1,115	721	752	657	602	611
Students with temporary visas	6,674	6,762	6,278	5,821	5,458	5,483	5,694	5,650
Other engineering	23,463	22,444	22,372	21,018	20,304	19,678	19,338	19,700
Total U.S. citizens or permanent residents	15,116	14,555	14,718	13,792	13,447	12,924	12,455	12,526
Black, non-Hispanic	328	352	368	437	460	502	487	497
American Indian/Alaskan Native	30	27	43	56	49	49	59	85
Asian/Pacific Islander	1,283	1,342	1,452	1,553	1,469	1,351	1,406	1,420
Hispanic	330	370	409	458	433	438	415	452
White, non-Hispanic	11,957	11,558	11,510	10,758	10,378	9,842	9,249	9,401
Other or unknown	1,188	906	936	530	658	742	839	671
Students with temporary visas	8,347	7,889	7,654	7,226	6,857	6,754	6,883	7,174
Total, health fields	58,565	62,988	68,563	73,291	77,177	78,856	79,682	80,474
Total U.S. citizens or permanent residents	54,010	58,522	63,946	68,889	72,821	74,019	74,785	75,401
Black, non-Hispanic	2,716	3,042	3,321	3,566	3,871	3,905	4,219	4,596
American Indian/Alaskan Native	245	272	297	342	341	368	369	436
Asian/Pacific Islander	1,923	2,214	2,790	3,142	3,460	3,996	4,355	4,865
Hispanic	2,008	2,379	2,671	2,686	3,147	3,196	3,147	3,284
White, non-Hispanic	45,211	48,734	52,398	56,268	58,549	59,082	58,568	58,341
Other or unknown	1,907	1,881	2,469	2,885	3,453	3,472	4,127	3,879
Students with temporary visas	4,555	4,466	4,617	4,402	4,356	4,837	4,897	5,073

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 14. Graduate students in science, engineering, and health fields in all institutions,
by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or
permanent residents : 1994-1998**

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Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total enrollment								
Total, all surveyed fields:								
1994	504,542	21,177	1,725	29,616	15,967	311,987	17,512	106,558
1995	499,732	22,154	1,857	29,361	17,264	304,438	21,764	102,894
1996	494,219	22,976	1,907	29,943	17,834	297,159	21,409	102,991
1997	487,371	23,571	1,969	30,328	18,151	286,560	22,931	103,861
1998	485,754	24,249	2,050	31,709	18,879	279,041	22,777	107,049
Total, science and engineering fields:								
1994	431,251	17,611	1,383	26,474	13,281	255,719	14,627	102,156
1995	422,555	18,283	1,516	25,901	14,117	245,889	18,311	98,538
1996	415,363	19,071	1,539	25,947	14,638	238,077	17,937	98,154
1997	407,689	19,352	1,600	25,973	15,004	227,992	18,804	98,964
1998	405,280	19,653	1,614	26,844	15,595	220,700	18,898	101,976
Sciences, total:								
1994	318,228	14,827	1,141	16,697	10,420	199,699	10,272	65,172
1995	315,356	15,427	1,285	16,893	11,309	193,933	13,438	63,071
1996	312,140	16,176	1,305	17,510	11,703	188,965	13,356	63,125
1997	306,656	16,477	1,361	17,872	12,193	181,931	14,328	62,494
1998	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
Physical sciences:								
1994	34,449	856	67	1,923	675	18,422	797	11,709
1995	33,417	897	76	1,780	732	17,487	1,020	11,425
1996	32,355	986	60	1,743	743	16,762	865	11,196
1997	31,108	952	70	1,638	784	15,749	1,001	10,914
1998	30,565	910	64	1,760	831	15,197	1,050	10,753
Earth, atmospheric, & ocean sciences:								
1994	16,042	203	49	454	344	11,351	375	3,266
1995	15,805	219	53	425	366	11,322	473	2,947
1996	15,280	223	65	411	381	10,956	477	2,767
1997	14,644	206	82	417	407	10,486	530	2,516
1998	14,364	206	85	425	390	10,175	581	2,502
Mathematical sciences:								
1994	19,579	673	36	1,208	369	10,496	734	6,063
1995	18,509	689	70	1,121	400	9,659	761	5,809
1996	18,015	711	41	1,225	425	9,201	651	5,761
1997	16,729	657	43	1,052	427	8,360	646	5,544
1998	16,463	613	34	1,174	454	8,081	692	5,415
Computer sciences:								
1994	34,128	1,182	43	4,056	633	15,709	1,441	11,064
1995	33,432	1,155	55	4,053	664	14,739	1,972	10,794
1996	34,592	1,278	53	4,269	701	14,443	1,993	11,855
1997	35,996	1,302	60	4,632	723	14,045	2,326	12,908
1998	37,850	1,352	93	5,278	754	13,937	2,279	14,157
Agricultural sciences:								
1994	12,199	239	37	276	263	7,972	273	3,139
1995	12,367	294	59	274	288	7,978	377	3,097
1996	11,914	268	49	281	367	7,732	269	2,948
1997	11,814	229	62	302	400	7,749	347	2,725
1998	11,811	310	69	304	383	7,857	294	2,594
Biological sciences:								
1994	58,143	1,709	183	3,953	1,651	36,389	1,429	12,829
1995	58,736	1,879	205	4,299	1,823	36,509	1,813	12,208
1996	58,128	2,010	200	4,464	1,847	36,327	1,790	11,490
1997	57,135	2,171	198	4,480	1,983	35,041	2,098	11,164
1998	57,060	2,186	192	4,426	2,057	34,553	2,214	11,432
Psychology:								
1994	54,554	3,529	317	1,583	2,485	42,062	2,235	2,343
1995	53,641	3,359	330	1,598	2,799	40,146	3,322	2,087
1996	53,209	3,455	359	1,776	3,002	39,327	3,317	1,973
1997	53,207	3,647	341	1,909	3,098	38,724	3,479	2,009
1998	53,055	3,845	315	2,038	3,315	37,886	3,462	2,194

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions,
by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or
permanent residents : 1994-1998**

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Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total enrollment								
Social sciences:								
1994	89,134	6,436	409	3,244	4,000	57,298	2,988	14,759
1995	89,449	6,935	437	3,343	4,237	56,093	3,700	14,704
1996	88,647	7,245	478	3,341	4,237	54,217	3,994	15,135
1997	86,023	7,313	505	3,442	4,371	51,777	3,901	14,714
1998	83,825	7,404	525	3,379	4,499	49,023	4,111	14,884
Engineering:								
1994	113,023	2,784	242	9,777	2,861	56,020	4,355	36,984
1995	107,199	2,856	231	9,008	2,808	51,956	4,873	35,467
1996	103,223	2,895	234	8,437	2,935	49,112	4,581	35,029
1997	101,033	2,875	239	8,101	2,811	46,061	4,476	36,470
1998	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
Health fields:								
1994	73,291	3,566	342	3,142	2,686	56,268	2,885	4,402
1995	77,177	3,871	341	3,460	3,147	58,549	3,453	4,356
1996	78,856	3,905	368	3,996	3,196	59,082	3,472	4,837
1997	79,682	4,219	369	4,355	3,147	58,568	4,127	4,897
1998	80,474	4,596	436	4,865	3,284	58,341	3,879	5,073
Men								
Total, all surveyed fields:								
1994	288,373	8,669	771	18,187	7,836	164,645	9,868	78,397
1995	279,406	8,934	834	17,487	8,188	157,487	12,022	74,454
1996	271,738	8,974	863	17,274	8,474	151,294	11,353	73,506
1997	264,528	9,121	890	17,097	8,526	143,766	11,991	73,137
1998	261,240	9,262	898	17,658	8,786	138,238	11,940	74,458
Total, science and engineering fields:								
1994	272,120	8,049	693	17,152	7,198	153,625	9,136	76,267
1995	262,341	8,211	753	16,371	7,406	146,057	11,181	72,362
1996	253,629	8,253	768	15,953	7,673	139,370	10,588	71,024
1997	245,643	8,337	804	15,665	7,702	131,502	10,961	70,672
1998	241,828	8,347	802	16,003	7,891	125,822	11,004	71,959
Sciences, total:								
1994	177,146	6,082	514	9,190	4,917	106,833	5,483	44,127
1995	173,156	6,254	571	9,143	5,210	102,983	7,069	41,926
1996	168,658	6,301	577	9,297	5,407	98,885	6,785	41,406
1997	163,336	6,377	624	9,346	5,531	93,719	7,349	40,390
1998	160,615	6,406	628	9,821	5,669	89,942	7,546	40,603
Physical sciences:								
1994	25,290	497	49	1,253	444	13,745	562	8,740
1995	24,327	529	57	1,159	470	13,004	722	8,386
1996	23,303	550	42	1,096	455	12,387	621	8,152
1997	22,257	508	46	1,045	500	11,571	689	7,898
1998	21,831	479	41	1,150	524	11,035	759	7,843
Earth, atmospheric, & ocean sciences:								
1994	10,689	118	26	297	214	7,403	242	2,389
1995	10,336	117	32	264	224	7,247	302	2,150
1996	9,786	116	36	250	233	6,865	292	1,994
1997	9,187	105	47	253	240	6,413	332	1,797
1998	8,733	105	45	238	209	6,063	334	1,739
Mathematical sciences:								
1994	13,044	343	24	735	241	6,824	503	4,374
1995	12,248	385	43	669	248	6,230	520	4,153
1996	11,794	368	24	702	266	5,910	425	4,099
1997	10,857	347	29	622	254	5,322	438	3,845
1998	10,483	339	16	702	276	5,045	467	3,638
Computer sciences:								
1994	26,043	696	36	2,695	473	12,442	1,053	8,648
1995	25,306	652	40	2,715	502	11,664	1,535	8,198
1996	25,802	718	39	2,836	524	11,412	1,481	8,792
1997	26,123	767	43	2,988	514	10,908	1,681	9,222
1998	27,206	768	68	3,387	560	10,787	1,633	10,003

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions,
by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or
permanent residents : 1994-1998**

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Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Men								
Agricultural sciences:								
1994	7,911	118	20	168	142	5,002	165	2,296
1995	7,935	150	29	147	154	4,988	235	2,232
1996	7,502	131	23	142	203	4,734	168	2,101
1997	7,280	105	34	164	242	4,642	189	1,904
1998	7,112	147	44	155	208	4,630	161	1,767
Biological sciences:								
1994	29,988	671	77	2,022	769	18,470	714	7,265
1995	29,890	691	87	2,165	854	18,393	963	6,737
1996	29,360	725	93	2,257	852	18,290	943	6,200
1997	28,513	783	91	2,170	900	17,497	1,058	6,014
1998	28,003	791	88	2,094	932	17,022	1,128	5,948
Psychology:								
1994	16,416	851	97	435	705	12,712	675	941
1995	15,877	817	93	416	762	11,983	949	857
1996	15,403	810	111	469	829	11,574	902	708
1997	15,528	910	118	510	866	11,316	1,058	750
1998	15,314	920	90	554	909	11,028	1,009	804
Social sciences:								
1994	47,765	2,788	185	1,585	1,929	30,235	1,569	9,474
1995	47,237	2,913	190	1,608	1,996	29,474	1,843	9,213
1996	45,708	2,883	209	1,545	2,045	27,713	1,953	9,360
1997	43,591	2,852	216	1,594	2,015	26,050	1,904	8,960
1998	41,933	2,857	236	1,541	2,051	24,332	2,055	8,861
Engineering:								
1994	94,974	1,967	179	7,962	2,281	46,792	3,653	32,140
1995	89,185	1,957	182	7,228	2,196	43,074	4,112	30,436
1996	84,971	1,952	191	6,656	2,266	40,485	3,803	29,618
1997	82,307	1,960	180	6,319	2,171	37,783	3,612	30,282
1998	81,213	1,941	174	6,182	2,222	35,880	3,458	31,356
Health fields:								
1994	16,253	620	78	1,035	638	11,020	732	2,130
1995	17,065	723	81	1,116	782	11,430	841	2,092
1996	18,109	721	95	1,321	801	11,924	765	2,482
1997	18,885	784	86	1,432	824	12,264	1,030	2,465
1998	19,412	915	96	1,655	895	12,416	936	2,499
Women								
Total, all surveyed fields:								
1994	216,169	12,508	954	11,429	8,131	147,342	7,644	28,161
1995	220,326	13,220	1,023	11,874	9,076	146,951	9,742	28,440
1996	222,481	14,002	1,044	12,669	9,360	145,865	10,056	29,485
1997	222,843	14,450	1,079	13,231	9,625	142,794	10,940	30,724
1998	224,514	14,987	1,152	14,051	10,093	140,803	10,837	32,591
Total, science and engineering fields:								
1994	159,131	9,562	690	9,322	6,083	102,094	5,491	25,889
1995	160,214	10,072	763	9,530	6,711	99,832	7,130	26,176
1996	161,734	10,818	771	9,994	6,965	98,707	7,349	27,130
1997	162,046	11,015	796	10,308	7,302	96,490	7,843	28,292
1998	163,452	11,306	812	10,841	7,704	94,878	7,894	30,017
Sciences, total:								
1994	141,082	8,745	627	7,507	5,503	92,866	4,789	21,045
1995	142,200	9,173	714	7,750	6,099	90,950	6,369	21,145
1996	143,482	9,875	728	8,213	6,296	90,080	6,571	21,719
1997	143,320	10,100	737	8,526	6,662	88,212	6,979	22,104
1998	144,378	10,420	749	8,963	7,014	86,767	7,137	23,328

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions,
by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or
permanent residents : 1994-1998**

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Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Women								
Physical sciences:								
1994	9,159	359	18	670	231	4,677	235	2,969
1995	9,090	368	19	621	262	4,483	298	3,039
1996	9,052	436	18	647	288	4,375	244	3,044
1997	8,851	444	24	593	284	4,178	312	3,016
1998	8,734	431	23	610	307	4,162	291	2,910
Earth, atmospheric, & ocean sciences:								
1994	5,353	85	23	157	130	3,948	133	877
1995	5,469	102	21	161	142	4,075	171	797
1996	5,494	107	29	161	148	4,091	185	773
1997	5,457	101	35	164	167	4,073	198	719
1998	5,631	101	40	187	181	4,112	247	763
Mathematical sciences:								
1994	6,535	330	12	473	128	3,672	231	1,689
1995	6,261	304	27	452	152	3,429	241	1,656
1996	6,221	343	17	523	159	3,291	226	1,662
1997	5,872	310	14	430	173	3,038	208	1,699
1998	5,980	274	18	472	178	3,036	225	1,777
Computer sciences:								
1994	8,085	486	7	1,361	160	3,267	388	2,416
1995	8,126	503	15	1,338	162	3,075	437	2,596
1996	8,790	560	14	1,433	177	3,031	512	3,063
1997	9,873	535	17	1,644	209	3,137	645	3,686
1998	10,644	584	25	1,891	194	3,150	646	4,154
Agricultural sciences:								
1994	4,288	121	17	108	121	2,970	108	843
1995	4,432	144	30	127	134	2,990	142	865
1996	4,412	137	26	139	164	2,998	101	847
1997	4,534	124	28	138	158	3,107	158	821
1998	4,699	163	25	149	175	3,227	133	827
Biological sciences:								
1994	28,155	1,038	106	1,931	882	17,919	715	5,564
1995	28,846	1,188	118	2,134	969	18,116	850	5,471
1996	28,768	1,285	107	2,207	995	18,037	847	5,290
1997	28,622	1,388	107	2,310	1,083	17,544	1,040	5,150
1998	29,057	1,395	104	2,332	1,125	17,531	1,086	5,484
Psychology:								
1994	38,138	2,678	220	1,148	1,780	29,350	1,560	1,402
1995	37,764	2,542	237	1,182	2,037	28,163	2,373	1,230
1996	37,806	2,645	248	1,307	2,173	27,753	2,415	1,265
1997	37,679	2,737	223	1,399	2,232	27,408	2,421	1,259
1998	37,741	2,925	225	1,484	2,406	26,858	2,453	1,390
Social sciences:								
1994	41,369	3,648	224	1,659	2,071	27,063	1,419	5,285
1995	42,212	4,022	247	1,735	2,241	26,619	1,857	5,491
1996	42,939	4,362	269	1,796	2,192	26,504	2,041	5,775
1997	42,432	4,461	289	1,848	2,356	25,727	1,997	5,754
1998	41,892	4,547	289	1,838	2,448	24,691	2,056	6,023
Engineering:								
1994	18,049	817	63	1,815	580	9,228	702	4,844
1995	18,014	899	49	1,780	612	8,882	761	5,031
1996	18,252	943	43	1,781	669	8,627	778	5,411
1997	18,726	915	59	1,782	640	8,278	864	6,188
1998	19,074	886	63	1,878	690	8,111	757	6,689
Health fields:								
1994	57,038	2,946	264	2,107	2,048	45,248	2,153	2,272
1995	60,112	3,148	260	2,344	2,365	47,119	2,612	2,264
1996	60,747	3,184	273	2,675	2,395	47,158	2,707	2,355
1997	60,797	3,435	283	2,923	2,323	46,304	3,097	2,432
1998	61,062	3,681	340	3,210	2,389	45,925	2,943	2,574

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 15. Graduate students in science, engineering, and health fields in public institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	330,251	345,759	353,017	353,662	350,331	345,756	340,462	338,812
Total, science and engineering fields	287,076	299,547	303,363	300,537	294,750	288,282	282,586	280,614
Sciences, total	207,826	216,723	221,017	220,739	218,844	215,375	211,456	209,901
Physical sciences, total	25,193	25,687	25,773	25,128	24,527	23,646	22,721	22,514
Astronomy	546	561	579	591	556	525	471	509
Chemistry	13,980	14,426	14,649	14,435	14,402	14,179	13,837	13,706
Physics	10,281	10,283	10,090	9,618	9,114	8,561	8,041	7,842
Physical sciences, n.e.c.	386	417	455	484	455	381	372	457
Earth, atmos., & ocean sci., total	11,928	12,683	13,077	13,189	13,255	12,885	12,425	12,155
Atmospheric sciences	948	1,064	1,094	1,090	1,047	1,066	1,068	942
Geosciences	6,207	6,356	6,384	6,327	6,279	6,063	5,802	5,519
Oceanography	1,953	2,076	2,134	2,294	2,263	2,184	2,067	2,162
Earth, atmos., & ocean sci., n.e.c.	2,820	3,187	3,465	3,478	3,666	3,572	3,488	3,532
Mathematical sciences	15,602	15,910	15,645	15,204	14,253	13,878	12,735	12,498
Computer sciences	20,867	21,547	21,535	20,560	20,532	20,848	22,200	23,231
Agricultural sciences	10,986	11,332	11,430	11,637	11,842	11,422	11,351	11,321
Biological sciences, total	37,951	39,748	41,403	42,529	42,486	42,006	41,117	41,143
Anatomy	765	742	760	805	779	793	778	701
Biochemistry	3,545	3,655	3,701	3,914	3,891	3,730	3,610	3,633
Biology	9,843	10,313	10,795	10,754	10,621	10,979	10,878	10,585
Biometry/epidemiology	1,226	1,562	1,728	1,732	1,724	1,777	1,734	2,138
Biophysics	387	417	426	415	472	459	419	417
Botany	2,522	2,559	2,573	2,626	2,469	2,367	2,258	2,189
Cell biology	1,587	1,824	2,089	2,285	2,358	2,371	2,359	2,523
Ecology	1,032	1,123	1,234	1,387	1,490	1,450	1,513	1,552
Entomology/parasitology	1,102	1,127	1,186	1,193	1,179	1,171	1,101	1,109
Genetics	1,058	1,133	1,147	1,083	1,077	1,119	1,144	1,075
Microbio., immunology, & virology	3,570	3,556	3,582	3,617	3,554	3,451	3,366	3,309
Nutrition	3,464	3,450	3,523	3,731	3,884	3,786	3,632	3,621
Pathology	1,016	1,007	1,012	1,079	1,056	1,059	1,063	1,074
Pharmacology	1,672	1,757	1,871	1,979	1,872	1,797	1,750	1,829
Physiology	1,530	1,526	1,559	1,521	1,548	1,439	1,373	1,359
Zoology	2,036	1,997	1,976	1,951	1,914	1,780	1,598	1,558
Biosciences, n.e.c.	1,596	2,000	2,241	2,457	2,598	2,478	2,541	2,471
Psychology	28,483	29,642	29,574	29,503	29,197	28,290	28,578	28,420
Social sciences, total	56,816	60,174	62,580	62,989	62,752	62,400	60,329	58,619
Agricultural economics	2,249	2,404	2,303	2,174	2,205	2,031	1,973	1,928
Anthropology (cultural & social)	4,965	5,205	5,457	5,646	5,602	5,678	5,494	5,514
Economics (except agricultural)	8,375	8,747	8,768	8,598	8,355	7,953	7,253	6,894
Geography	3,561	3,799	4,052	4,168	4,077	4,013	3,994	4,017
Linguistics	2,382	2,442	2,486	2,419	2,383	2,281	2,168	2,097
Political science	20,757	21,871	22,625	21,983	21,869	21,115	20,340	19,285
Sociology	6,481	6,880	7,167	7,243	7,271	7,220	7,210	7,106
Sociology/anthropology	615	690	738	796	749	737	779	693
Social sciences, other	7,431	8,136	8,984	9,962	10,241	11,372	11,118	11,085
Engineering, total	79,250	82,824	82,346	79,798	75,906	72,907	71,130	70,713
Aerospace engineering	3,241	3,199	3,126	2,917	2,598	2,435	2,332	2,311
Agricultural engineering	943	967	970	1,006	981	959	893	880
Biomedical engineering	1,317	1,535	1,639	1,641	1,656	1,700	1,844	1,842
Chemical engineering	5,166	5,413	5,532	5,592	5,440	5,348	5,173	5,056
Civil engineering	13,136	14,752	14,743	14,948	14,534	14,091	13,056	12,508
Electrical engineering	22,475	23,610	23,066	21,943	20,636	19,523	20,126	20,412
Engineering science	1,367	1,470	1,432	1,368	1,294	1,252	1,122	1,069
Industrial/manufacturing eng.	8,390	9,095	9,228	9,193	8,593	8,105	7,591	7,558
Mechanical engineering	12,769	13,656	13,489	12,992	12,144	11,595	11,166	11,117
Metallurgical/materials eng.	3,461	3,769	3,741	3,667	3,454	3,313	3,269	3,218
Nuclear engineering	1,093	1,081	1,094	1,062	975	826	751	715
Engineering, other	5,892	4,277	4,286	3,469	3,601	3,760	3,807	4,027
Total, health fields	43,175	46,212	49,654	53,125	55,581	57,474	57,876	58,198
Clinical fields	1,385	1,620	1,670	1,845	1,832	1,952	2,037	2,032
Dental sciences	791	840	862	919	925	992	1,090	1,170
Nursing	16,709	17,689	19,094	21,232	22,116	21,505	21,139	20,352
Pharmaceutical sciences	2,243	2,258	2,349	2,335	2,385	2,429	2,488	2,710
Preventive medicine/community health	5,927	6,079	6,860	6,929	7,254	7,135	6,902	7,285
Speech pathology/audiology	7,635	8,227	8,800	9,423	9,918	10,778	11,063	10,887
Veterinary sciences	821	880	802	807	875	894	1,123	1,139
Other health fields	7,664	8,619	9,217	9,635	10,276	11,789	12,034	12,623

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 16. Graduate students in science, engineering, and health fields in private institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	141,011	147,873	151,432	150,880	149,401	148,463	146,909	146,942
Total, science and engineering fields	125,621	131,097	132,523	130,714	127,805	127,081	125,103	124,666
Sciences, total	91,295	95,886	98,011	97,489	96,512	96,765	95,200	95,092
Physical sciences, total	9,517	9,661	9,545	9,321	8,890	8,709	8,387	8,051
Astronomy	283	308	301	382	356	349	307	311
Chemistry	5,427	5,503	5,482	5,362	5,192	5,179	4,957	4,748
Physics	3,800	3,839	3,751	3,544	3,311	3,167	3,106	2,967
Physical sciences, n.e.c.	7	11	11	33	31	14	17	25
Earth, atmos., & ocean sci., total	2,552	2,664	2,728	2,853	2,550	2,395	2,219	2,209
Atmospheric sciences	20	25	18	19	25	20	24	23
Geosciences	1,360	1,388	1,401	1,414	1,329	1,260	1,195	1,186
Oceanography	433	454	477	559	440	414	391	383
Earth, atmos., & ocean sci., n.e.c.	739	797	832	861	756	701	609	617
Mathematical sciences	4,350	4,445	4,355	4,375	4,256	4,137	3,994	3,965
Computer sciences	13,743	14,746	14,654	13,568	12,900	13,744	13,796	14,619
Agricultural sciences	520	495	484	562	525	492	463	490
Biological sciences, total	13,827	14,429	15,049	15,614	16,250	16,122	16,018	15,917
Anatomy	286	288	267	274	277	318	316	314
Biochemistry	1,656	1,721	1,812	1,718	1,659	1,535	1,483	1,505
Biology	3,449	3,561	3,532	3,466	3,663	3,656	3,765	3,672
Biometry/epidemiology	806	803	930	978	1,088	1,224	1,166	1,346
Biophysics	310	334	354	379	373	374	329	320
Botany	172	130	141	122	140	137	144	139
Cell biology	1,222	1,269	1,285	1,483	1,532	1,525	1,622	1,556
Ecology	148	178	176	179	190	165	146	144
Entomology/parasitology	69	66	61	70	62	63	60	59
Genetics	462	506	638	616	623	610	616	630
Microbio., immunology, & virology	1,358	1,416	1,486	1,524	1,518	1,512	1,488	1,515
Nutrition	700	709	865	1,016	1,132	1,073	918	810
Pathology	433	449	563	628	614	597	611	506
Pharmacology	760	772	774	851	828	855	832	884
Physiology	802	791	813	857	992	938	925	810
Zoology	155	142	144	141	154	131	132	118
Biosciences, n.e.c.	1,039	1,294	1,208	1,312	1,405	1,409	1,465	1,589
Psychology	22,860	23,842	24,983	25,051	24,444	24,919	24,629	24,635
Social sciences, total	23,926	25,604	26,213	26,145	26,697	26,247	25,694	25,206
Agricultural economics	115	118	112	115	133	86	70	67
Anthropology (cultural & social)	1,766	1,918	1,904	2,019	2,091	2,095	2,066	2,063
Economics (except agricultural)	4,332	4,505	4,446	4,315	4,318	4,127	3,844	3,805
Geography	199	303	326	334	294	318	293	308
Linguistics	1,043	835	835	860	811	875	840	786
Political science	10,950	11,926	12,451	12,334	12,429	12,137	11,743	11,395
Sociology	1,912	2,131	2,258	2,255	2,293	2,205	2,203	1,992
Sociology/anthropology	284	289	197	191	192	186	169	164
Social sciences, other	3,325	3,579	3,684	3,722	4,136	4,218	4,466	4,626
Engineering, total	34,326	35,211	34,512	33,225	31,293	30,316	29,903	29,574
Aerospace engineering	879	837	814	798	745	773	751	826
Agricultural engineering	40	41	48	55	56	53	48	45
Biomedical engineering	922	1,002	1,036	1,109	1,076	1,032	1,003	1,063
Chemical engineering	1,961	1,984	1,984	2,016	1,984	2,025	2,074	2,004
Civil engineering	4,262	4,820	4,840	4,977	4,684	4,437	3,993	3,866
Electrical engineering	12,707	12,850	12,248	11,107	10,111	10,213	10,492	10,986
Engineering science	787	748	748	721	661	499	525	632
Industrial/manufacturing eng.	4,286	4,430	4,368	4,468	4,550	4,294	4,145	3,501
Mechanical engineering	4,961	4,981	4,988	4,769	4,219	3,914	3,879	3,579
Metallurgical/materials eng.	1,699	1,743	1,622	1,524	1,466	1,400	1,380	1,426
Nuclear engineering	189	205	212	184	179	154	117	106
Engineering, other	1,633	1,570	1,604	1,497	1,562	1,522	1,496	1,540
Total, health fields	15,390	16,776	18,909	20,166	21,596	21,382	21,806	22,276
Clinical fields	896	1,088	1,227	1,268	1,277	1,193	1,365	1,402
Dental sciences	225	281	273	280	326	299	321	301
Nursing	5,303	5,524	5,687	5,765	6,289	5,883	5,722	5,147
Pharmaceutical sciences	725	546	522	566	563	546	562	697
Preventive medicine/community health	2,496	2,658	3,116	3,530	3,604	3,408	3,404	3,857
Speech pathology/audiology	1,310	1,564	1,940	2,050	2,174	2,195	2,257	2,428
Veterinary sciences	73	62	75	68	54	52	52	53
Other health fields	4,362	5,053	6,069	6,639	7,309	7,806	8,123	8,391

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 17. Graduate students in science and engineering fields in all institutions,
by field and Carnegie classification: 1991-1998**

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Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
All institutions:								
Total, science and engineering fields	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Sciences, total	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Physical sciences	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Earth, atmospheric, & ocean sciences	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Mathematical sciences	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Computer sciences	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Agricultural sciences	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Biological sciences	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Psychology	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Social sciences	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Engineering, total	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Research I:								
Total, science and engineering fields	209,217	216,974	219,205	217,275	212,830	207,941	201,719	199,438
Sciences, total	145,143	150,316	152,783	152,724	150,937	148,534	143,644	141,832
Physical sciences	21,962	22,333	22,255	21,758	21,039	20,267	19,539	19,138
Earth, atmospheric, & ocean sciences	7,769	8,035	8,208	8,233	8,090	7,784	7,400	7,227
Mathematical sciences	10,205	10,496	10,293	10,129	9,809	9,505	8,855	8,605
Computer sciences	11,101	11,304	11,497	11,233	11,151	11,401	11,563	12,140
Agricultural sciences	7,767	7,796	7,892	8,058	8,110	7,907	7,716	7,450
Biological sciences	31,447	32,720	33,798	34,675	34,596	34,171	33,360	33,638
Psychology	12,094	12,378	12,420	12,338	12,227	12,110	11,889	11,874
Social sciences	42,798	45,254	46,420	46,300	45,915	45,389	43,322	41,760
Engineering, total	64,074	66,658	66,422	64,551	61,893	59,407	58,075	57,606
Research II:								
Total, science and engineering fields	48,917	51,587	51,706	50,317	48,733	47,361	45,928	45,884
Sciences, total	33,200	35,201	35,510	34,978	34,410	33,829	32,496	32,582
Physical sciences	4,382	4,509	4,469	4,328	4,165	4,021	3,899	3,773
Earth, atmospheric, & ocean sciences	1,901	1,998	2,013	2,051	2,001	1,892	1,827	1,760
Mathematical sciences	2,669	2,641	2,507	2,414	2,230	2,101	1,900	1,849
Computer sciences	2,983	3,607	3,612	3,420	3,278	3,540	2,942	3,143
Agricultural sciences	2,004	2,194	2,184	2,209	2,292	2,090	2,122	2,249
Biological sciences	5,413	5,520	5,628	5,793	5,821	5,658	5,710	5,650
Psychology	4,451	4,739	4,631	4,506	4,545	4,348	4,212	4,295
Social sciences	9,397	9,993	10,466	10,257	10,078	10,179	9,884	9,863
Engineering, total	15,717	16,386	16,196	15,339	14,323	13,532	13,432	13,302
Doctorate-granting:								
Total, science and engineering fields	76,192	79,641	81,368	81,696	78,947	79,304	79,411	78,624
Sciences, total	57,290	60,427	62,148	62,776	61,541	61,696	62,068	61,422
Physical sciences	5,578	5,762	5,701	5,565	5,473	5,480	5,192	5,188
Earth, atmospheric, & ocean sciences	2,693	2,872	2,942	3,059	3,031	2,934	2,664	2,715
Mathematical sciences	3,795	3,937	3,877	3,858	3,522	3,481	3,257	3,203
Computer sciences	10,632	10,987	11,251	10,852	10,516	10,911	11,915	11,869
Agricultural sciences	675	778	750	898	882	864	766	865
Biological sciences	6,100	6,495	6,688	6,912	6,987	7,150	7,107	6,880
Psychology	13,082	13,706	13,930	14,211	13,691	13,298	13,968	13,781
Social sciences	14,735	15,890	17,009	17,421	17,439	17,578	17,199	16,921
Engineering, total	18,902	19,214	19,220	18,920	17,406	17,608	17,343	17,202

See explanatory information, if any, and SOURCE at end of table.

**Table 17. Graduate students in science and engineering fields in all institutions,
by field and Carnegie classification: 1991-1998**

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Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
Comprehensive:								
Total, science and engineering fields	61,690	65,231	66,228	64,482	64,240	63,178	63,080	63,353
Sciences, total	50,327	53,004	54,556	53,508	53,752	53,262	53,606	53,840
Physical sciences	2,445	2,399	2,521	2,419	2,391	2,245	2,130	2,141
Earth, atmospheric, & ocean sciences	1,569	1,805	2,016	2,078	2,105	2,065	2,193	2,114
Mathematical sciences	3,036	3,023	3,068	2,952	2,750	2,684	2,496	2,589
Computer sciences	8,838	9,296	8,725	7,616	7,432	7,793	8,662	9,581
Agricultural sciences	965	973	1,017	966	1,022	1,006	1,171	1,219
Biological sciences	4,952	5,304	5,920	5,976	6,356	6,183	6,084	5,974
Psychology	15,311	16,238	17,066	17,153	16,915	16,977	16,509	16,309
Social sciences	13,211	13,966	14,223	14,348	14,781	14,309	14,361	13,913
Engineering, total	11,363	12,227	11,672	10,974	10,488	9,916	9,474	9,513
Engineering:								
Total, science and engineering fields	2,026	2,178	2,196	2,230	2,337	2,137	2,201	2,107
Sciences, total	569	615	633	586	578	540	538	533
Physical sciences	113	118	123	111	106	105	101	93
Earth, atmospheric, & ocean sciences	164	180	194	181	166	160	166	176
Mathematical sciences	17	14	18	11	8	9	4	8
Computer sciences	267	293	292	275	284	250	256	253
Agricultural sciences	0	0	0	0	1	0	0	0
Biological sciences	8	10	6	8	13	16	11	3
Psychology	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
Engineering, total	1,457	1,563	1,563	1,644	1,759	1,597	1,663	1,574
Liberal arts:								
Total, science and engineering fields	2,326	2,409	2,305	2,307	2,151	2,038	1,889	1,635
Sciences, total	2,102	2,173	2,097	2,126	1,986	1,893	1,769	1,566
Physical sciences	117	119	115	110	102	101	109	95
Earth, atmospheric, & ocean sciences	144	162	157	160	143	142	155	149
Mathematical sciences	33	36	36	37	30	30	21	23
Computer sciences	56	55	39	26	23	23	18	13
Agricultural sciences	95	86	71	68	60	47	39	28
Biological sciences	133	133	135	135	128	133	129	121
Psychology	1,422	1,442	1,417	1,450	1,382	1,298	1,198	1,059
Social sciences	102	140	127	140	118	119	100	78
Engineering, total	224	236	208	181	165	145	120	69
Other:								
Total, science and engineering fields	12,329	12,624	12,878	12,944	13,317	13,404	13,461	14,239
Sciences, total	10,490	10,873	11,301	11,530	12,152	12,386	12,535	13,218
Physical sciences	113	108	134	158	141	136	138	137
Earth, atmospheric, & ocean sciences	240	295	275	280	269	303	239	223
Mathematical sciences	197	208	201	178	160	205	196	186
Computer sciences	733	751	773	706	748	674	640	851
Agricultural sciences	0	0	0	0	0	0	0	0
Biological sciences	3,725	3,995	4,277	4,644	4,835	4,817	4,734	4,794
Psychology	4,983	4,981	5,093	4,896	4,881	5,178	5,431	5,737
Social sciences	499	535	548	668	1,118	1,073	1,157	1,290
Engineering, total	1,839	1,751	1,577	1,414	1,165	1,018	926	1,021

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 18. Full-time graduate students in science, engineering, and health fields in all institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Total, science and engineering fields	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Sciences, total	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Physical sciences, total	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Astronomy	810	840	848	953	871	854	768	787
Chemistry	16,731	16,999	17,204	17,104	16,762	16,506	16,019	15,774
Physics	12,442	12,689	12,397	11,766	11,052	10,400	9,923	9,661
Physical sciences, n.e.c.	134	145	162	220	217	196	182	178
Earth, atmos., & ocean sci., total	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Atmospheric sciences	859	959	980	993	959	980	966	856
Geosciences	5,688	5,885	5,970	5,946	5,796	5,579	5,432	5,214
Oceanography	1,991	2,133	2,177	2,333	2,228	2,074	1,971	2,047
Earth, atmos., & ocean sci., n.e.c.	1,835	2,009	2,240	2,198	2,292	2,193	2,181	2,372
Mathematical sciences	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Computer sciences	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Agricultural sciences	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Biological sciences, total	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Anatomy	961	960	977	983	978	1,042	1,033	961
Biochemistry	4,954	5,045	5,174	5,222	5,203	4,971	4,805	4,872
Biology	9,439	9,678	10,028	10,086	9,973	10,043	10,299	10,004
Biometry/epidemiology	1,431	1,634	1,990	2,056	2,093	2,162	2,005	2,559
Biophysics	679	728	755	770	800	807	728	707
Botany	2,304	2,301	2,353	2,349	2,149	2,130	2,051	1,993
Cell biology	2,716	2,961	3,189	3,596	3,694	3,670	3,663	3,757
Ecology	919	997	1,057	1,203	1,304	1,243	1,200	1,230
Entomology/parasitology	1,014	1,016	1,039	1,066	1,041	1,027	995	1,000
Genetics	1,412	1,526	1,690	1,602	1,619	1,653	1,666	1,621
Microbio., immunology, & virology	4,408	4,460	4,607	4,705	4,673	4,537	4,416	4,410
Nutrition	2,878	2,863	3,045	3,221	3,431	3,482	3,289	3,177
Pathology	1,113	1,165	1,296	1,389	1,382	1,355	1,420	1,339
Pharmacology	2,304	2,397	2,500	2,672	2,529	2,499	2,446	2,545
Physiology	2,163	2,160	2,220	2,221	2,376	2,217	2,102	1,990
Zoology	1,782	1,789	1,747	1,717	1,746	1,628	1,520	1,424
Biosciences, n.e.c.	2,223	2,709	2,814	3,159	3,339	3,278	3,359	3,419
Psychology	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Social sciences, total	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Agricultural economics	2,011	2,105	1,963	1,936	1,977	1,784	1,718	1,670
Anthropology (cultural & social)	5,079	5,337	5,429	5,837	5,792	6,003	5,799	5,734
Economics (except agricultural)	9,850	10,184	10,107	9,945	9,743	9,548	8,813	8,594
Geography	2,539	2,801	3,026	3,119	2,962	2,959	2,967	2,907
Linguistics	2,549	2,477	2,538	2,518	2,486	2,530	2,360	2,234
Political science	16,083	17,667	18,372	17,918	17,630	17,669	17,071	16,244
Sociology	5,949	6,469	6,625	6,720	6,692	6,610	6,717	6,500
Sociology/anthropology	624	651	639	693	663	620	666	615
Social sciences, other	5,947	6,566	6,921	7,586	8,285	9,189	9,377	9,272
Engineering, total	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Aerospace engineering	3,325	3,306	3,262	3,000	2,693	2,576	2,529	2,565
Agricultural engineering	823	840	835	879	859	799	748	756
Biomedical engineering	1,925	2,167	2,269	2,292	2,315	2,316	2,462	2,513
Chemical engineering	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Civil engineering	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Electrical engineering	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Engineering science	1,364	1,415	1,397	1,347	1,243	1,057	1,018	1,114
Industrial/manufacturing eng.	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Mechanical engineering	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Metallurgical/materials eng.	4,058	4,274	4,249	4,108	3,880	3,693	3,661	3,702
Nuclear engineering	1,080	1,084	1,070	997	883	771	708	662
Engineering, other	4,154	3,480	3,549	3,000	3,039	3,132	2,974	2,985
Total, health fields	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Clinical fields	1,811	2,038	2,217	2,374	2,347	2,395	2,765	2,662
Dental sciences	875	988	1,005	1,048	1,096	1,116	1,235	1,283
Nursing	6,475	6,422	6,875	7,914	8,561	8,653	9,035	9,028
Pharmaceutical sciences	2,198	2,074	2,133	2,188	2,152	2,226	2,240	2,320
Preventive medicine/community health	4,419	4,789	5,334	5,425	5,904	5,782	5,736	6,508
Speech pathology/audiology	6,499	7,144	8,109	8,707	9,064	9,649	9,907	10,141
Veterinary sciences	717	754	693	696	733	736	985	970
Other health fields	6,872	7,890	9,283	10,729	12,038	13,702	14,438	15,180

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 19. Male full-time graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	193,540	200,824	200,790	197,428	191,201	187,133	183,306	181,205
Total, science and engineering fields	185,090	191,791	190,864	186,675	179,834	174,783	170,168	167,620
Sciences, total	123,739	128,029	128,266	126,686	123,556	120,758	117,094	114,843
Physical sciences, total	22,845	23,173	22,888	22,277	21,238	20,413	19,458	19,050
Astronomy	641	659	658	732	657	630	564	566
Chemistry	11,404	11,482	11,465	11,309	11,022	10,837	10,402	10,283
Physics	10,727	10,945	10,658	10,093	9,431	8,839	8,386	8,086
Physical sciences, n.e.c.	73	87	107	143	128	107	106	115
Earth, atmos., & ocean sci., total	7,197	7,588	7,815	7,676	7,387	6,955	6,676	6,386
Atmospheric sciences	682	760	783	775	742	773	729	641
Geosciences	4,154	4,296	4,338	4,174	4,000	3,780	3,627	3,388
Oceanography	1,306	1,357	1,385	1,476	1,360	1,235	1,150	1,129
Earth, atmos., & ocean sci., n.e.c.	1,055	1,175	1,309	1,251	1,285	1,167	1,170	1,228
Mathematical sciences	10,035	10,250	10,096	9,810	9,213	8,797	8,171	7,810
Computer sciences	13,035	13,936	13,791	13,127	12,840	13,088	13,541	14,385
Agricultural sciences	6,424	6,454	6,281	6,166	6,158	5,847	5,598	5,400
Biological sciences, total	23,498	24,230	24,920	25,493	25,297	24,737	24,030	23,648
Anatomy	507	509	517	507	513	557	544	516
Biochemistry	2,923	2,979	2,979	3,020	2,952	2,826	2,763	2,775
Biology	5,202	5,253	5,421	5,479	5,315	5,317	5,302	5,090
Biometry/epidemiology	649	727	887	882	872	884	784	1,006
Biophysics	498	528	533	554	568	567	517	509
Botany	1,396	1,397	1,409	1,354	1,202	1,164	1,084	1,025
Cell biology	1,480	1,625	1,714	1,949	2,002	1,969	1,999	1,981
Ecology	531	557	565	641	705	662	625	626
Entomology/parasitology	720	714	709	710	698	680	636	645
Genetics	711	744	811	748	789	799	774	710
Microbio., immunology, & virology	2,339	2,363	2,388	2,443	2,419	2,325	2,241	2,235
Nutrition	991	949	1,004	986	1,012	1,015	876	850
Pathology	666	656	707	773	751	704	727	666
Pharmacology	1,230	1,278	1,327	1,400	1,308	1,282	1,287	1,310
Physiology	1,288	1,295	1,326	1,319	1,394	1,314	1,243	1,182
Zoology	1,070	1,101	1,037	987	1,014	920	855	780
Biosciences, n.e.c.	1,297	1,555	1,586	1,741	1,783	1,752	1,773	1,742
Psychology	10,957	11,171	11,189	11,131	10,903	10,794	10,846	10,657
Social sciences, total	29,748	31,227	31,286	31,006	30,520	30,127	28,774	27,507
Agricultural economics	1,477	1,512	1,358	1,302	1,314	1,195	1,135	1,103
Anthropology (cultural & social)	2,123	2,193	2,258	2,384	2,434	2,435	2,368	2,292
Economics (except agricultural)	7,175	7,343	7,253	7,091	6,844	6,640	6,068	5,865
Geography	1,667	1,851	1,966	2,028	1,869	1,878	1,828	1,761
Linguistics	1,151	1,025	1,053	997	981	943	827	775
Political science	9,724	10,444	10,595	10,226	9,889	9,755	9,279	8,840
Sociology	2,809	2,912	2,766	2,715	2,719	2,689	2,670	2,471
Sociology/anthropology	291	287	308	278	269	258	263	241
Social sciences, other	3,331	3,660	3,729	3,985	4,201	4,334	4,336	4,159
Engineering, total	61,351	63,762	62,598	59,989	56,278	54,025	53,074	52,777
Aerospace engineering	3,071	3,043	2,971	2,722	2,417	2,293	2,226	2,251
Agricultural engineering	715	714	709	704	679	619	560	545
Biomedical engineering	1,422	1,640	1,685	1,703	1,689	1,678	1,733	1,748
Chemical engineering	4,803	4,849	4,875	4,912	4,734	4,594	4,425	4,209
Civil engineering	9,309	10,126	9,934	9,855	9,431	8,937	8,361	8,109
Electrical engineering	17,739	18,570	17,926	17,021	15,747	15,441	16,097	16,621
Engineering science	1,182	1,230	1,195	1,145	1,061	883	843	892
Industrial/manufacturing eng.	4,556	4,906	4,729	4,612	4,191	4,037	3,977	3,855
Mechanical engineering	10,745	11,297	11,210	10,658	9,993	9,500	9,143	8,840
Metallurgical/materials eng.	3,316	3,467	3,447	3,268	3,064	2,878	2,806	2,810
Nuclear engineering	935	935	926	880	776	649	586	551
Engineering, other	3,558	2,985	2,991	2,509	2,496	2,516	2,317	2,346
Total, health fields	8,450	9,033	9,926	10,753	11,367	12,350	13,138	13,585
Clinical fields	995	1,040	1,110	1,126	1,111	1,156	1,361	1,325
Dental sciences	623	684	702	723	726	722	765	796
Nursing	468	464	546	609	707	786	899	984
Pharmaceutical sciences	1,303	1,213	1,201	1,221	1,192	1,223	1,170	1,203
Preventive medicine/community health	1,778	1,886	2,114	2,153	2,248	2,281	2,249	2,414
Speech pathology/audiology	506	578	665	690	695	746	785	837
Veterinary sciences	436	439	372	369	378	384	484	448
Other health fields	2,341	2,729	3,216	3,862	4,310	5,052	5,425	5,578

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 20. Female full-time graduate students in science, engineering, and health fields
in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	113,500	121,785	128,889	134,701	137,947	141,320	143,743	146,404
Total, science and engineering fields	92,084	98,719	103,166	106,373	107,419	109,411	110,540	111,897
Sciences, total	82,401	88,055	91,967	94,796	95,923	97,585	98,028	98,925
Physical sciences, total	7,272	7,500	7,723	7,766	7,664	7,543	7,434	7,350
Astronomy	169	181	190	221	214	224	204	221
Chemistry	5,327	5,517	5,739	5,795	5,740	5,669	5,617	5,491
Physics	1,715	1,744	1,739	1,673	1,621	1,561	1,537	1,575
Physical sciences, n.e.c.	61	58	55	77	89	89	76	63
Earth, atmos., & ocean sci., total	3,176	3,398	3,552	3,794	3,888	3,871	3,874	4,103
Atmospheric sciences	177	199	197	218	217	207	237	215
Geosciences	1,534	1,589	1,632	1,772	1,796	1,799	1,805	1,826
Oceanography	685	776	792	857	868	839	821	918
Earth, atmos., & ocean sci., n.e.c.	780	834	931	947	1,007	1,026	1,011	1,144
Mathematical sciences	4,221	4,429	4,434	4,416	4,197	4,169	3,973	3,972
Computer sciences	3,481	3,550	3,583	3,547	3,650	4,085	4,793	5,352
Agricultural sciences	2,865	2,998	3,187	3,326	3,462	3,451	3,512	3,600
Biological sciences, total	19,202	20,159	21,561	22,524	23,033	23,007	22,967	23,360
Anatomy	454	451	460	476	465	485	489	445
Biochemistry	2,031	2,066	2,195	2,202	2,251	2,145	2,042	2,097
Biology	4,237	4,425	4,607	4,607	4,658	4,726	4,997	4,914
Biometry/epidemiology	782	907	1,103	1,174	1,221	1,278	1,221	1,553
Biophysics	181	200	222	216	232	240	211	198
Botany	908	904	944	995	947	966	967	968
Cell biology	1,236	1,336	1,475	1,647	1,692	1,701	1,664	1,776
Ecology	388	440	492	562	599	581	575	604
Entomology/parasitology	294	302	330	356	343	347	359	355
Genetics	701	782	879	854	830	854	892	911
Microbio., immunology, & virology	2,069	2,097	2,219	2,262	2,254	2,212	2,175	2,175
Nutrition	1,887	1,914	2,041	2,235	2,419	2,467	2,413	2,327
Pathology	447	509	589	616	631	651	693	673
Pharmacology	1,074	1,119	1,173	1,272	1,221	1,217	1,159	1,235
Physiology	875	865	894	902	982	903	859	808
Zoology	712	688	710	730	732	708	665	644
Biosciences, n.e.c.	926	1,154	1,228	1,418	1,556	1,526	1,586	1,677
Psychology	21,301	22,991	23,593	24,157	24,319	24,674	24,761	24,925
Social sciences, total	20,883	23,030	24,334	25,266	25,710	26,785	26,714	26,263
Agricultural economics	534	593	605	634	663	589	583	567
Anthropology (cultural & social)	2,956	3,144	3,171	3,453	3,358	3,568	3,431	3,442
Economics (except agricultural)	2,675	2,841	2,854	2,854	2,899	2,908	2,745	2,729
Geography	872	950	1,060	1,091	1,093	1,081	1,139	1,146
Linguistics	1,398	1,452	1,485	1,521	1,505	1,587	1,533	1,459
Political science	6,359	7,223	7,777	7,692	7,741	7,914	7,792	7,404
Sociology	3,140	3,557	3,859	4,005	3,973	3,921	4,047	4,029
Sociology/anthropology	333	364	331	415	394	362	403	374
Social sciences, other	2,616	2,906	3,192	3,601	4,084	4,855	5,041	5,113
Engineering, total	9,683	10,664	11,199	11,577	11,496	11,826	12,512	12,972
Aerospace engineering	254	263	291	278	276	283	303	314
Agricultural engineering	108	126	126	175	180	180	188	211
Biomedical engineering	503	527	584	589	626	638	729	765
Chemical engineering	985	1,097	1,166	1,193	1,223	1,315	1,359	1,392
Civil engineering	2,019	2,328	2,524	2,786	2,817	2,854	2,907	2,937
Electrical engineering	2,165	2,426	2,444	2,391	2,440	2,548	2,830	3,169
Engineering science	182	185	202	202	182	174	175	222
Industrial/manufacturing eng.	1,042	1,175	1,173	1,298	1,151	1,091	1,098	1,087
Mechanical engineering	942	1,086	1,185	1,217	1,135	1,190	1,289	1,233
Metallurgical/materials eng.	742	807	802	840	816	815	855	892
Nuclear engineering	145	149	144	117	107	122	122	111
Engineering, other	596	495	558	491	543	616	657	639
Total, health fields	21,416	23,066	25,723	28,328	30,528	31,909	33,203	34,507
Clinical fields	816	998	1,107	1,248	1,236	1,239	1,404	1,337
Dental sciences	252	304	303	325	370	394	470	487
Nursing	6,007	5,958	6,329	7,305	7,854	7,867	8,136	8,044
Pharmaceutical sciences	895	861	932	967	960	1,003	1,070	1,117
Preventive medicine/community health	2,641	2,903	3,220	3,272	3,656	3,501	3,487	4,094
Speech pathology/audiology	5,993	6,566	7,444	8,017	8,369	8,903	9,122	9,304
Veterinary sciences	281	315	321	327	355	352	501	522
Other health fields	4,531	5,161	6,067	6,867	7,728	8,650	9,013	9,602

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions,
by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

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Field, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Total, all surveyed fields	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Total U.S. citizens or permanent residents	211,592	225,879	236,316	242,299	242,431	241,072	238,362	236,490
Black, non-Hispanic	8,863	10,219	11,387	11,965	12,501	12,989	13,570	13,743
American Indian/Alaskan Native	857	1,014	1,063	1,138	1,254	1,307	1,361	1,350
Asian/Pacific Islander	12,489	14,709	16,941	19,177	19,072	19,499	20,002	21,046
Hispanic	8,195	9,076	9,798	9,878	11,040	11,349	11,464	12,014
White, non-Hispanic	172,434	181,698	187,128	191,378	187,792	185,596	180,567	177,109
Other or unknown	8,754	9,163	9,999	8,763	10,772	10,332	11,398	11,228
Students with temporary visas	95,448	96,730	93,363	89,830	86,717	87,381	88,687	91,119
Total, science and engineering	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Total U.S. citizens or permanent residents	185,487	197,473	204,484	206,851	204,163	200,783	196,013	192,407
Black, non-Hispanic	7,692	8,904	9,903	10,343	10,668	10,986	11,411	11,264
American Indian/Alaskan Native	717	847	896	960	1,055	1,087	1,124	1,102
Asian/Pacific Islander	11,267	13,317	15,197	17,170	16,771	16,814	17,015	17,681
Hispanic	6,931	7,595	8,200	8,184	9,082	9,321	9,567	9,985
White, non-Hispanic	150,939	158,434	161,321	162,784	157,498	153,837	147,440	142,911
Other or unknown	7,941	8,376	8,967	7,410	9,089	8,738	9,456	9,464
Students with temporary visas	91,687	93,037	89,546	86,197	83,090	83,411	84,695	87,110
Sciences, total	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Total U.S. citizens or permanent residents	148,396	157,575	163,261	165,684	165,564	164,295	161,207	158,990
Black, non-Hispanic	6,552	7,545	8,413	8,640	8,978	9,323	9,739	9,679
American Indian/Alaskan Native	610	741	773	826	919	946	984	966
Asian/Pacific Islander	7,424	8,820	10,336	11,446	11,631	12,000	12,320	12,878
Hispanic	5,770	6,222	6,682	6,564	7,459	7,663	7,978	8,338
White, non-Hispanic	122,871	128,490	130,976	132,701	129,698	127,657	122,723	119,458
Other or unknown	5,169	5,757	6,081	5,507	6,879	6,706	7,463	7,671
Students with temporary visas	57,744	58,509	56,972	55,798	53,915	54,048	53,915	54,778
Physical sciences	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Total U.S. citizens or permanent residents	18,267	18,759	19,231	19,130	18,410	17,639	16,796	16,460
Black, non-Hispanic	529	630	690	709	729	769	741	725
American Indian/Alaskan Native	56	63	73	60	66	55	58	57
Asian/Pacific Islander	1,219	1,336	1,652	1,600	1,462	1,422	1,345	1,442
Hispanic	562	572	591	575	586	604	649	679
White, non-Hispanic	15,412	15,566	15,681	15,652	14,813	14,177	13,284	12,851
Other or unknown	489	592	544	534	754	612	719	706
Students with temporary visas	11,850	11,914	11,380	10,913	10,492	10,317	10,096	9,940
Earth, atmospheric, & ocean sciences	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Total U.S. citizens or permanent residents	7,802	8,309	8,680	8,608	8,689	8,430	8,328	8,302
Black, non-Hispanic	97	128	142	129	136	130	138	136
American Indian/Alaskan Native	18	23	29	39	40	42	46	58
Asian/Pacific Islander	200	287	375	328	318	291	288	304
Hispanic	194	222	289	240	259	263	275	255
White, non-Hispanic	7,041	7,302	7,516	7,678	7,657	7,447	7,266	7,187
Other or unknown	252	347	329	194	279	257	315	362
Students with temporary visas	2,571	2,677	2,687	2,862	2,586	2,396	2,222	2,187
Mathematical sciences	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Total U.S. citizens or permanent residents	8,380	8,939	9,056	8,876	8,291	7,885	7,262	7,090
Black, non-Hispanic	276	331	411	412	423	422	386	355
American Indian/Alaskan Native	12	20	13	26	41	31	32	22
Asian/Pacific Islander	555	625	648	802	738	755	693	786
Hispanic	225	231	258	213	234	216	242	260
White, non-Hispanic	6,762	7,144	7,048	6,993	6,443	6,138	5,572	5,300
Other or unknown	550	588	678	430	412	323	337	367
Students with temporary visas	5,876	5,740	5,474	5,350	5,119	5,081	4,882	4,692
Computer sciences	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Total U.S. citizens or permanent residents	8,426	8,852	8,985	8,731	8,610	8,374	8,588	9,041
Black, non-Hispanic	446	411	460	465	485	475	494	469
American Indian/Alaskan Native	18	25	26	11	22	20	22	47
Asian/Pacific Islander	1,191	1,387	1,505	1,702	1,652	1,733	1,964	2,371
Hispanic	194	225	217	215	256	236	241	263
White, non-Hispanic	5,936	6,129	6,018	5,924	5,726	5,437	5,220	5,290
Other or unknown	641	675	759	414	469	473	647	601
Students with temporary visas	8,090	8,634	8,389	7,943	7,880	8,799	9,746	10,696

See explanatory information, if any, and SOURCE at end of table.

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions,
by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

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Field, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Agricultural sciences	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Total U.S. citizens or permanent residents	6,405	6,590	6,661	6,680	6,866	6,725	6,741	6,761
Black, non-Hispanic	113	163	162	162	227	194	176	207
American Indian/Alaskan Native	27	31	31	27	46	37	47	56
Asian/Pacific Islander	197	174	223	211	215	221	237	240
Hispanic	236	232	256	217	221	277	294	289
White, non-Hispanic	5,727	5,811	5,828	5,913	5,932	5,816	5,725	5,759
Other or unknown	105	179	161	150	225	180	262	210
Students with temporary visas	2,884	2,862	2,807	2,812	2,754	2,573	2,369	2,239
Biological sciences	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Total U.S. citizens or permanent residents	31,102	32,558	34,520	36,228	37,196	37,229	36,765	36,529
Black, non-Hispanic	997	1,119	1,348	1,369	1,450	1,513	1,734	1,663
American Indian/Alaskan Native	91	115	123	141	160	158	166	161
Asian/Pacific Islander	1,985	2,357	2,908	3,420	3,759	3,874	3,826	3,807
Hispanic	1,100	1,169	1,334	1,344	1,477	1,468	1,613	1,665
White, non-Hispanic	26,275	27,064	27,906	29,036	29,139	29,028	28,041	27,705
Other or unknown	654	734	901	918	1,211	1,188	1,385	1,528
Students with temporary visas	11,598	11,831	11,961	11,789	11,134	10,515	10,232	10,479
Psychology	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Total U.S. citizens or permanent residents	30,634	32,548	33,196	33,430	33,574	33,845	33,936	33,837
Black, non-Hispanic	1,424	1,656	1,854	2,046	2,028	2,087	2,224	2,424
American Indian/Alaskan Native	180	210	214	234	255	270	263	226
Asian/Pacific Islander	749	946	1,090	1,160	1,168	1,329	1,438	1,478
Hispanic	1,587	1,648	1,610	1,505	1,944	2,093	2,111	2,386
White, non-Hispanic	25,610	26,849	27,239	27,138	26,664	26,561	26,281	25,739
Other or unknown	1,084	1,239	1,189	1,347	1,515	1,505	1,619	1,584
Students with temporary visas	1,624	1,614	1,586	1,858	1,648	1,623	1,671	1,745
Social sciences	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Total U.S. citizens or permanent residents	37,380	41,020	42,932	44,001	43,928	44,168	42,791	40,970
Black, non-Hispanic	2,670	3,107	3,346	3,348	3,500	3,733	3,846	3,700
American Indian/Alaskan Native	208	254	264	288	289	333	350	339
Asian/Pacific Islander	1,328	1,708	1,935	2,223	2,319	2,375	2,529	2,450
Hispanic	1,672	1,923	2,127	2,255	2,482	2,506	2,553	2,541
White, non-Hispanic	30,108	32,625	33,740	34,367	33,324	33,053	31,334	29,627
Other or unknown	1,394	1,403	1,520	1,520	2,014	2,168	2,179	2,313
Students with temporary visas	13,251	13,237	12,688	12,271	12,302	12,744	12,697	12,800
Engineering, total	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Total U.S. citizens or permanent residents	37,091	39,898	41,223	41,167	38,599	36,488	34,806	33,417
Black, non-Hispanic	1,140	1,359	1,490	1,703	1,690	1,663	1,672	1,585
American Indian/Alaskan Native	107	106	123	134	136	141	140	136
Asian/Pacific Islander	3,843	4,497	4,861	5,724	5,140	4,814	4,695	4,803
Hispanic	1,161	1,373	1,518	1,620	1,623	1,658	1,589	1,647
White, non-Hispanic	28,068	29,944	30,345	30,083	27,800	26,180	24,717	23,453
Other or unknown	2,772	2,619	2,886	1,903	2,210	2,032	1,993	1,793
Students with temporary visas	33,943	34,528	32,574	30,399	29,175	29,363	30,780	32,332
Chemical engineering	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Total U.S. citizens or permanent residents	2,798	2,948	3,107	3,370	3,304	3,368	3,263	3,044
Black, non-Hispanic	95	108	115	133	134	143	128	126
American Indian/Alaskan Native	22	11	12	15	18	21	13	16
Asian/Pacific Islander	311	274	348	395	351	378	405	356
Hispanic	110	131	131	134	164	159	115	146
White, non-Hispanic	2,193	2,315	2,395	2,578	2,531	2,527	2,484	2,291
Other or unknown	67	109	106	115	106	140	118	109
Students with temporary visas	2,990	2,998	2,934	2,735	2,653	2,541	2,521	2,557
Civil engineering	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Total U.S. citizens or permanent residents	6,140	7,003	7,440	7,848	7,652	7,509	7,011	6,811
Black, non-Hispanic	153	188	229	230	261	242	247	230
American Indian/Alaskan Native	20	20	26	23	27	36	41	26
Asian/Pacific Islander	459	558	601	776	760	719	625	711
Hispanic	227	277	337	354	378	452	441	463
White, non-Hispanic	5,030	5,663	5,926	6,212	5,892	5,706	5,386	5,088
Other or unknown	251	297	321	253	334	354	271	293
Students with temporary visas	5,188	5,451	5,018	4,793	4,596	4,282	4,257	4,235

See explanatory information, if any, and SOURCE at end of table.

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions,
by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

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Field, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Electrical engineering	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Total U.S. citizens or permanent residents	9,976	10,577	10,428	10,467	9,382	8,714	8,516	8,153
Black, non-Hispanic	371	437	479	538	484	445	481	466
American Indian/Alaskan Native	26	26	27	23	29	27	25	13
Asian/Pacific Islander	1,498	1,766	1,690	2,147	1,889	1,830	1,766	1,854
Hispanic	331	378	419	415	385	374	389	391
White, non-Hispanic	6,853	7,116	7,003	6,701	5,893	5,420	5,141	4,887
Other or unknown	897	854	810	643	702	618	714	542
Students with temporary visas	9,928	10,419	9,942	8,945	8,805	9,275	10,411	11,637
Industrial engineering	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Total U.S. citizens or permanent residents	2,760	3,076	3,209	3,180	2,863	2,512	2,398	2,237
Black, non-Hispanic	153	191	181	197	200	189	185	163
American Indian/Alaskan Native	9	14	14	9	4	8	8	5
Asian/Pacific Islander	232	336	392	359	337	285	300	268
Hispanic	103	122	144	160	146	153	143	125
White, non-Hispanic	2,000	2,160	2,161	2,293	1,921	1,733	1,636	1,550
Other or unknown	263	253	317	162	255	144	126	126
Students with temporary visas	2,838	3,005	2,693	2,730	2,479	2,616	2,677	2,705
Mechanical engineering	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Total U.S. citizens or permanent residents	6,120	6,803	7,228	7,090	6,548	6,024	5,591	5,212
Black, non-Hispanic	149	199	225	283	285	298	315	285
American Indian/Alaskan Native	9	14	19	25	30	23	22	19
Asian/Pacific Islander	578	709	826	969	804	705	631	626
Hispanic	193	207	215	250	257	237	234	238
White, non-Hispanic	4,592	5,169	5,289	5,175	4,774	4,438	4,073	3,695
Other or unknown	599	505	654	388	398	323	316	349
Students with temporary visas	5,567	5,580	5,167	4,785	4,580	4,666	4,841	4,861
Other engineering	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Total U.S. citizens or permanent residents	9,297	9,491	9,811	9,212	8,850	8,361	8,027	7,960
Black, non-Hispanic	219	236	261	322	326	346	316	315
American Indian/Alaskan Native	21	21	25	39	28	26	31	57
Asian/Pacific Islander	765	854	1,004	1,078	999	897	968	988
Hispanic	197	258	272	307	293	283	267	284
White, non-Hispanic	7,400	7,521	7,571	7,124	6,789	6,356	5,997	5,942
Other or unknown	695	601	678	342	415	453	448	374
Students with temporary visas	7,432	7,075	6,820	6,411	6,062	5,983	6,073	6,337
Total, health fields	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Total U.S. citizens or permanent residents	26,105	28,406	31,832	35,448	38,268	40,289	42,349	44,083
Black, non-Hispanic	1,171	1,315	1,484	1,622	1,833	2,003	2,159	2,479
American Indian/Alaskan Native	140	167	167	178	199	220	237	248
Asian/Pacific Islander	1,222	1,392	1,744	2,007	2,301	2,685	2,987	3,365
Hispanic	1,264	1,481	1,598	1,694	1,958	2,028	1,897	2,029
White, non-Hispanic	21,495	23,264	25,807	28,594	30,294	31,759	33,127	34,198
Other or unknown	813	787	1,032	1,353	1,683	1,594	1,942	1,764
Students with temporary visas	3,761	3,693	3,817	3,633	3,627	3,970	3,992	4,009

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 22. Full-time graduate science, engineering, and health students without U.S. citizenship or permanent resident status in all institutions, by detailed field: 1991-1998

Field	1991	1992 1	1993 1	1994 1	1995 1	1996 1	1997 1	1998 1
Total, all surveyed fields	95,448	96,730	93,363	89,830	86,717	87,381	88,687	91,119
Total, science and engineering fields	91,687	93,037	89,546	86,197	83,090	83,411	84,695	87,110
Sciences, total	57,744	58,509	56,972	55,798	53,915	54,048	53,915	54,778
Physical sciences, total	11,850	11,914	11,380	10,913	10,492	10,317	10,096	9,940
Astronomy	212	219	210	259	225	212	184	206
Chemistry	6,338	6,264	6,075	5,915	5,790	5,737	5,610	5,554
Physics	5,269	5,395	5,041	4,672	4,419	4,323	4,257	4,120
Physical sciences, n.e.c.	31	36	54	67	58	45	45	60
Earth, atmos., & ocean sci., total	2,571	2,677	2,687	2,862	2,586	2,396	2,222	2,187
Atmospheric sciences	289	307	272	250	248	268	281	234
Geosciences	1,406	1,520	1,520	1,559	1,390	1,300	1,178	1,119
Oceanography	564	563	557	671	583	510	471	483
Earth, atmos., & ocean sci., n.e.c.	312	287	338	382	365	318	292	351
Mathematical sciences	5,876	5,740	5,474	5,350	5,119	5,081	4,882	4,692
Computer sciences	8,090	8,634	8,389	7,943	7,880	8,799	9,746	10,696
Agricultural sciences	2,884	2,862	2,807	2,812	2,754	2,573	2,369	2,239
Biological sciences, total	11,598	11,831	11,961	11,789	11,134	10,515	10,232	10,479
Anatomy	241	237	239	222	240	217	213	198
Biochemistry	1,717	1,721	1,742	1,689	1,582	1,444	1,357	1,384
Biology	1,864	1,891	1,829	1,732	1,687	1,679	1,779	1,803
Biometry/epidemiology	448	487	542	533	500	468	436	606
Biophysics	246	249	214	208	198	175	170	162
Botany	849	807	817	739	639	627	610	621
Cell biology	619	692	727	848	789	775	762	781
Ecology	150	133	165	161	154	143	133	134
Entomology/parasitology	335	304	321	323	332	285	259	266
Genetics	308	344	367	348	340	373	399	380
Microbio., immunology, & virology	1,193	1,141	1,229	1,246	1,129	1,027	952	929
Nutrition	1,117	1,076	1,197	1,099	1,116	1,022	956	923
Pathology	315	322	339	335	322	319	281	278
Pharmacology	632	680	612	627	529	556	536	558
Physiology	638	632	597	574	509	420	401	417
Zoology	314	295	261	272	228	211	184	166
Biosciences, n.e.c.	612	820	763	833	840	774	804	873
Psychology	1,624	1,614	1,586	1,858	1,648	1,623	1,671	1,745
Social sciences, total	13,251	13,237	12,688	12,271	12,302	12,744	12,697	12,800
Agricultural economics	954	995	892	832	899	804	821	786
Anthropology (cultural & social)	716	717	675	681	584	592	596	637
Economics (except agricultural)	4,779	4,845	4,694	4,579	4,691	4,904	4,773	4,673
Geography	410	426	432	398	396	398	442	478
Linguistics	1,052	952	908	898	874	883	852	879
Political science	2,817	2,803	2,764	2,639	2,675	2,956	2,863	2,932
Sociology	1,311	1,299	1,152	1,065	943	936	990	942
Sociology/anthropology	110	98	72	77	77	67	73	87
Social sciences, other	1,102	1,102	1,099	1,102	1,163	1,204	1,287	1,386
Engineering, total	33,943	34,528	32,574	30,399	29,175	29,363	30,780	32,332
Aerospace engineering	1,124	1,060	1,084	1,138	1,082	1,159	1,202	1,297
Agricultural engineering	493	463	432	441	445	406	351	358
Biomedical engineering	662	723	699	730	662	633	652	659
Chemical engineering	2,990	2,998	2,934	2,735	2,653	2,541	2,521	2,557
Civil engineering	5,188	5,451	5,018	4,793	4,596	4,282	4,257	4,235
Electrical engineering	9,928	10,419	9,942	8,945	8,805	9,275	10,411	11,637
Engineering science	590	613	573	514	418	426	398	485
Industrial/manufacturing eng.	2,838	3,005	2,693	2,730	2,479	2,616	2,677	2,705
Mechanical engineering	5,567	5,580	5,167	4,785	4,580	4,666	4,841	4,861
Metallurgical/materials eng.	1,991	2,027	1,985	1,773	1,722	1,732	1,767	1,835
Nuclear engineering	490	473	436	379	347	284	274	273
Engineering, other	2,082	1,716	1,611	1,436	1,386	1,343	1,429	1,430
Total, health fields	3,761	3,693	3,817	3,633	3,627	3,970	3,992	4,009
Clinical fields	331	382	392	369	256	245	234	226
Dental sciences	223	228	236	210	240	281	307	310
Nursing	252	215	245	282	296	263	305	306
Pharmaceutical sciences	984	974	954	871	957	1,052	1,067	1,052
Preventive medicine/community health	962	841	869	728	724	793	765	799
Speech pathology/audiology	315	327	339	335	271	291	297	342
Veterinary sciences	223	232	223	211	241	266	273	220
Other health fields	471	494	559	627	642	779	744	754

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 23. Full-time graduate students in science and engineering fields in all institutions,
by field and Carnegie classification: 1991-1998**

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Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
All institutions:								
Total, science and engineering fields	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Sciences, total	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Physical sciences	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Earth, atmospheric, & ocean sciences	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Mathematical sciences	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Computer sciences	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Agricultural sciences	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Biological sciences	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Psychology	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Social sciences	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Engineering, total	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Research I:								
Total, science and engineering fields	170,099	176,703	179,114	177,769	172,924	169,585	165,314	165,003
Sciences, total	121,715	126,380	128,608	128,656	126,326	124,280	120,429	119,633
Physical sciences	20,718	21,030	20,962	20,470	19,742	19,039	18,255	17,921
Earth, atmospheric, & ocean sciences	6,319	6,637	6,808	6,809	6,655	6,317	6,050	6,014
Mathematical sciences	8,841	9,154	8,966	8,717	8,338	8,063	7,602	7,402
Computer sciences	8,123	8,304	8,335	8,208	8,099	8,110	8,229	8,929
Agricultural sciences	6,557	6,570	6,594	6,669	6,648	6,448	6,219	5,998
Biological sciences	28,474	29,436	30,543	31,497	31,387	30,884	30,067	30,483
Psychology	9,947	10,296	10,332	10,252	10,101	10,052	9,814	9,708
Social sciences	32,736	34,953	36,068	36,034	35,356	35,367	34,193	33,178
Engineering, total	48,384	50,323	50,506	49,113	46,598	45,305	44,885	45,370
Research II:								
Total, science and engineering fields	32,210	33,955	34,071	33,706	33,772	33,077	32,439	31,803
Sciences, total	23,560	24,718	25,061	25,137	25,416	25,109	24,290	23,960
Physical sciences	3,764	3,874	3,833	3,824	3,690	3,492	3,428	3,296
Earth, atmospheric, & ocean sciences	1,328	1,478	1,497	1,551	1,568	1,444	1,420	1,416
Mathematical sciences	2,016	1,936	1,931	1,848	1,788	1,670	1,509	1,459
Computer sciences	1,519	1,845	1,903	1,839	1,839	1,941	1,786	1,941
Agricultural sciences	1,501	1,661	1,640	1,583	1,665	1,573	1,596	1,624
Biological sciences	4,258	4,297	4,457	4,610	4,731	4,636	4,663	4,541
Psychology	3,148	3,235	3,173	3,281	3,405	3,319	3,177	3,245
Social sciences	6,026	6,392	6,627	6,601	6,730	7,034	6,711	6,438
Engineering, total	8,650	9,237	9,010	8,569	8,356	7,968	8,149	7,843
Doctorate-granting:								
Total, science and engineering fields	40,486	42,795	43,107	44,015	42,306	43,072	43,746	42,654
Sciences, total	31,913	33,860	34,468	35,509	34,522	35,140	35,802	34,841
Physical sciences	4,273	4,447	4,361	4,276	4,033	4,016	3,863	3,756
Earth, atmospheric, & ocean sciences	1,591	1,633	1,740	1,794	1,749	1,724	1,632	1,720
Mathematical sciences	2,200	2,336	2,375	2,401	2,172	2,092	1,978	1,858
Computer sciences	3,587	3,825	3,760	3,712	3,746	3,983	4,680	4,645
Agricultural sciences	501	595	547	600	561	596	535	595
Biological sciences	4,318	4,574	4,742	4,995	5,029	4,981	5,002	4,820
Psychology	7,806	8,123	8,619	8,946	8,570	8,754	9,233	9,099
Social sciences	7,637	8,327	8,324	8,785	8,662	8,994	8,879	8,348
Engineering, total	8,573	8,935	8,639	8,506	7,784	7,932	7,944	7,813

See explanatory information, if any, and SOURCE at end of table.

**Table 23. Full-time graduate students in science and engineering fields in all institutions,
by field and Carnegie classification: 1991-1998**

Page 2 of 2

Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
Comprehensive:								
Total, science and engineering fields	22,880	24,895	25,393	25,338	25,345	25,552	26,202	26,915
Sciences, total	19,322	20,838	21,484	21,575	21,767	22,217	22,912	23,479
Physical sciences	1,074	1,042	1,149	1,154	1,152	1,120	1,048	1,149
Earth, atmospheric, & ocean sciences	681	752	825	849	825	831	932	841
Mathematical sciences	959	1,000	1,007	1,037	919	901	839	852
Computer sciences	2,871	3,041	2,891	2,462	2,324	2,691	3,207	3,749
Agricultural sciences	655	556	631	588	706	643	730	762
Biological sciences	2,259	2,434	2,838	2,775	2,884	2,975	3,058	2,914
Psychology	6,761	7,633	7,744	8,171	8,224	8,273	8,101	8,252
Social sciences	4,062	4,380	4,399	4,539	4,733	4,783	4,997	4,960
Engineering, total	3,558	4,057	3,909	3,763	3,578	3,335	3,290	3,436
Engineering:								
Total, science and engineering fields	843	904	936	895	844	818	865	908
Sciences, total	374	387	405	367	350	370	352	362
Physical sciences	101	97	102	87	82	91	86	79
Earth, atmospheric, & ocean sciences	158	161	177	164	153	160	166	175
Mathematical sciences	17	13	18	11	8	9	4	8
Computer sciences	90	107	102	97	94	95	86	98
Agricultural sciences	0	0	0	0	0	0	0	0
Biological sciences	8	9	6	8	13	15	10	2
Psychology	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0
Engineering, total	469	517	531	528	494	448	513	546
Liberal arts:								
Total, science and engineering fields	1,545	1,658	1,513	1,585	1,449	1,419	1,287	1,064
Sciences, total	1,444	1,539	1,441	1,507	1,362	1,340	1,219	1,016
Physical sciences	88	94	94	100	85	85	94	79
Earth, atmospheric, & ocean sciences	119	139	133	118	107	108	123	112
Mathematical sciences	26	32	32	34	25	26	16	17
Computer sciences	10	9	5	6	2	5	2	0
Agricultural sciences	75	70	56	52	40	38	30	21
Biological sciences	115	114	118	123	115	112	114	110
Psychology	979	1,023	953	989	928	907	801	644
Social sciences	32	58	50	85	60	59	39	33
Engineering, total	101	119	72	78	87	79	68	48
Other:								
Total, science and engineering fields	9,111	9,600	9,896	9,740	10,613	10,671	10,855	11,170
Sciences, total	7,812	8,362	8,766	8,731	9,736	9,887	10,118	10,477
Physical sciences	99	89	110	132	118	113	118	120
Earth, atmospheric, & ocean sciences	177	186	187	185	218	242	227	211
Mathematical sciences	197	208	201	178	160	205	196	186
Computer sciences	316	355	378	350	386	348	344	375
Agricultural sciences	0	0	0	0	0	0	0	0
Biological sciences	3,268	3,525	3,777	4,009	4,171	4,141	4,083	4,138
Psychology	3,617	3,852	3,961	3,649	3,994	4,163	4,481	4,634
Social sciences	138	147	152	228	689	675	669	813
Engineering, total	1,299	1,238	1,130	1,009	877	784	737	693

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary source of support: 1991-1998**

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields:								
Total, all sources	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Federal, total	63,014	65,626	67,688	68,566	67,310	65,252	64,598	64,109
Dept. of Defense	9,128	9,247	9,750	9,449	9,339	8,802	9,052	8,355
Dept. of HHS, total	20,493	21,428	22,038	22,680	22,787	22,371	22,560	22,819
NIH	16,018	17,093	18,137	18,295	18,111	17,932	18,142	18,332
Other HHS	4,475	4,335	3,901	4,385	4,676	4,439	4,418	4,487
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,309	2,586	2,645
NSF	12,666	13,366	13,530	13,990	13,661	13,412	13,375	13,532
USDA	3,075	3,216	3,324	3,422	3,254	3,004	2,646	2,485
All other Federal	17,652	18,369	19,046	19,025	18,269	15,354	14,379	14,273
Institutional support	125,387	127,923	129,019	129,295	129,397	128,457	128,932	128,890
Other outside support, total	27,070	27,769	26,714	27,255	25,952	25,404	25,050	26,339
All other U.S.	20,427	21,309	21,233	21,537	20,405	20,154	20,237	22,121
Foreign	6,643	6,460	5,481	5,718	5,547	5,250	4,813	4,218
Self-support	91,569	101,291	106,258	107,013	106,489	109,340	108,469	108,271
Total, science and engineering:								
Total, all sources	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Federal, total	56,046	58,298	60,393	60,789	59,408	57,857	56,840	56,148
Dept. of Defense	8,711	8,848	9,315	9,067	9,006	8,471	8,732	8,048
Dept. of HHS, total	15,472	16,274	16,827	17,148	17,110	16,914	16,813	16,925
NIH	14,172	15,043	15,871	15,950	15,672	15,485	15,349	15,444
Other HHS	1,300	1,231	956	1,198	1,438	1,429	1,464	1,481
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,295	2,565	2,619
NSF	12,610	13,296	13,441	13,873	13,561	13,330	13,272	13,398
USDA	3,015	3,147	3,246	3,348	3,199	2,954	2,604	2,437
All other Federal	16,238	16,733	17,564	17,353	16,532	13,893	12,854	12,721
Institutional support	117,907	120,276	120,899	120,834	120,417	119,086	119,267	118,815
Other outside support, total	25,549	26,075	24,971	25,390	23,926	23,379	23,081	24,169
All other U.S.	19,367	20,075	19,933	20,130	18,909	18,559	18,754	20,363
Foreign	6,182	6,000	5,038	5,260	5,017	4,820	4,327	3,806
Self-support	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385
Sciences, total:								
Total, all sources	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Federal, total	40,064	41,734	43,503	43,938	43,047	42,024	40,934	40,489
Dept. of Defense	3,840	3,895	4,176	4,350	4,196	3,933	3,928	3,689
Dept. of HHS, total	14,662	15,373	15,903	16,242	16,192	16,079	15,897	15,944
NIH	13,448	14,245	15,077	15,168	14,904	14,754	14,582	14,615
Other HHS	1,214	1,128	826	1,074	1,288	1,325	1,315	1,329
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,202	1,304	1,376
NSF	8,313	8,691	8,880	9,109	8,981	8,737	8,654	8,647
USDA	2,741	2,789	2,940	3,003	2,858	2,663	2,390	2,254
All other Federal	10,508	10,986	11,604	11,234	10,820	9,410	8,761	8,579
Institutional support	93,291	95,350	95,940	96,269	96,585	95,694	95,499	95,587
Other outside support, total	14,923	15,525	15,254	16,012	14,819	14,505	14,129	14,383
All other U.S.	10,831	11,556	11,860	12,364	11,457	11,222	11,209	11,770
Foreign	4,092	3,969	3,394	3,648	3,362	3,283	2,920	2,613
Self-support	57,862	63,475	65,536	65,263	65,028	66,120	64,560	63,309
Physical sciences:								
Total, all sources	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Federal, total	10,834	11,007	11,140	11,032	10,359	9,887	9,470	9,157
Dept. of Defense	1,226	1,194	1,187	1,316	1,198	1,073	1,037	994
Dept. of HHS, total	2,042	2,188	2,162	2,209	2,078	2,078	1,967	1,909
NIH	1,874	2,056	2,051	2,074	1,898	1,795	1,651	1,649
Other HHS	168	132	111	135	180	283	316	260
NASA ¹	N/A	N/A	N/A	N/A	N/A	538	586	595
NSF	3,571	3,601	3,623	3,703	3,605	3,385	3,378	3,328
USDA	61	68	61	42	38	43	31	40
All other Federal	3,934	3,956	4,107	3,762	3,440	2,770	2,471	2,291
Institutional support	15,049	15,358	15,148	14,831	14,848	14,349	14,131	14,069
Other outside support, total	2,228	2,349	2,234	2,316	2,081	2,096	1,863	1,849
All other U.S.	1,927	2,044	1,955	2,008	1,794	1,802	1,645	1,660
Foreign	301	305	279	308	287	294	218	189
Self-support	2,006	1,959	2,089	1,864	1,614	1,624	1,428	1,325

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary source of support: 1991-1998**

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Earth, atmospheric, & ocean sciences:								
Total, all sources	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Federal, total	3,119	3,436	3,652	3,630	3,472	3,273	3,119	2,963
Dept. of Defense	452	472	517	494	410	393	366	336
Dept. of HHS, total	56	49	48	37	33	49	40	40
NIH	23	43	41	36	30	30	27	23
Other HHS	33	6	7	1	3	19	13	17
NASA ¹	N/A	N/A	N/A	N/A	N/A	331	355	390
NSF	1,223	1,320	1,366	1,409	1,387	1,242	1,201	1,122
USDA	69	86	64	61	65	75	52	77
All other Federal	1,319	1,509	1,657	1,629	1,577	1,183	1,105	998
Institutional support	4,314	4,316	4,366	4,343	4,441	4,273	4,389	4,449
Other outside support, total	974	1,006	928	1,023	968	918	884	860
All other U.S.	687	761	735	790	733	701	700	696
Foreign	287	245	193	233	235	217	184	164
Self-support	1,966	2,228	2,421	2,474	2,394	2,362	2,158	2,217
Mathematical sciences:								
Total, all sources	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Federal, total	1,503	1,497	1,474	1,397	1,287	1,237	1,152	1,049
Dept. of Defense	376	386	399	372	322	351	363	283
Dept. of HHS, total	69	118	80	76	87	82	96	102
NIH	64	111	74	68	63	61	66	70
Other HHS	5	7	6	8	24	21	30	32
NASA ¹	N/A	N/A	N/A	N/A	N/A	21	19	11
NSF	452	457	470	518	474	435	386	387
USDA	21	25	28	16	13	9	16	7
All other Federal	585	511	497	415	391	339	272	259
Institutional support	9,531	9,578	9,394	9,461	9,151	8,836	8,469	8,315
Other outside support, total	590	626	524	552	496	554	491	450
All other U.S.	321	356	303	333	309	347	314	311
Foreign	269	270	221	219	187	207	177	139
Self-support	2,632	2,978	3,138	2,816	2,476	2,339	2,032	1,968
Computer sciences:								
Total, all sources	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Federal, total	2,533	2,661	2,918	3,070	3,175	3,105	3,173	3,326
Dept. of Defense	1,131	1,210	1,327	1,345	1,419	1,349	1,434	1,312
Dept. of HHS, total	71	104	107	103	111	113	106	123
NIH	65	101	99	95	93	80	78	88
Other HHS	6	3	8	8	18	33	28	35
NASA ¹	N/A	N/A	N/A	N/A	N/A	121	122	124
NSF	896	962	1,004	1,046	1,053	1,049	1,087	1,177
USDA	8	6	7	9	13	13	12	10
All other Federal	427	379	473	567	579	460	412	580
Institutional support	5,474	5,609	5,509	5,437	5,488	5,641	5,916	6,159
Other outside support, total	1,322	1,350	1,383	1,393	1,300	1,166	1,182	1,251
All other U.S.	972	1,029	1,131	1,107	1,063	919	1,025	1,077
Foreign	350	321	252	286	237	247	157	174
Self-support	7,187	7,866	7,564	6,774	6,527	7,261	8,063	9,001
Agricultural sciences:								
Total, all sources	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Federal, total	1,896	1,993	1,965	1,922	2,061	1,973	1,783	1,685
Dept. of Defense	26	18	37	35	32	38	39	51
Dept. of HHS, total	46	41	34	50	25	31	30	30
NIH	38	38	32	47	19	17	21	15
Other HHS	8	3	2	3	6	14	9	15
NASA ¹	N/A	N/A	N/A	N/A	N/A	28	28	36
NSF	61	76	76	87	92	97	102	93
USDA	1,117	1,110	1,150	1,114	1,195	1,069	956	958
All other Federal	646	748	668	636	717	710	628	517
Institutional support	3,535	3,621	3,635	3,810	3,884	3,681	3,671	3,766
Other outside support, total	1,715	1,685	1,681	1,671	1,484	1,443	1,566	1,583
All other U.S.	1,059	1,099	1,189	1,153	1,081	1,088	1,227	1,287
Foreign	656	586	492	518	403	355	339	296
Self-support	2,143	2,153	2,187	2,089	2,191	2,201	2,090	1,966

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary source of support: 1991-1998**

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Biological sciences:								
Total, all sources	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Federal, total	14,503	15,148	16,210	16,724	16,627	16,549	16,338	16,209
Dept. of Defense	223	232	273	346	359	365	373	357
Dept. of HHS, total	10,667	11,054	11,632	11,979	12,058	11,876	11,863	11,892
NIH	10,215	10,637	11,314	11,464	11,386	11,287	11,279	11,274
Other HHS	452	417	318	515	672	589	584	618
NASA ¹	N/A	N/A	N/A	N/A	N/A	90	109	103
NSF	1,282	1,347	1,382	1,382	1,407	1,494	1,535	1,534
USDA	1,062	1,083	1,222	1,289	1,090	1,071	927	807
All other Federal	1,269	1,432	1,701	1,728	1,713	1,653	1,531	1,516
Institutional support	19,267	19,753	20,028	20,712	20,832	20,417	20,331	20,245
Other outside support, total	3,735	3,787	3,864	4,138	3,893	3,741	3,603	3,772
All other U.S.	3,017	3,109	3,280	3,504	3,286	3,184	3,084	3,243
Foreign	718	678	584	634	607	557	519	529
Self-support	5,195	5,701	6,379	6,443	6,978	7,037	6,725	6,782
Psychology:								
Total, all sources	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Federal, total	2,492	2,582	2,653	2,634	2,543	2,753	2,722	2,984
Dept. of Defense	159	136	163	175	175	139	113	135
Dept. of HHS, total	1,342	1,398	1,423	1,365	1,326	1,523	1,465	1,498
NIH	901	962	1,163	1,098	1,094	1,218	1,198	1,235
Other HHS	441	436	260	267	232	305	267	263
NASA ¹	N/A	N/A	N/A	N/A	N/A	21	20	24
NSF	268	283	314	289	288	289	278	287
USDA	24	19	15	38	16	5	7	8
All other Federal	699	746	738	767	738	776	839	1,032
Institutional support	12,279	12,676	13,215	12,966	12,841	13,053	13,481	13,428
Other outside support, total	1,071	1,108	1,079	1,190	1,133	1,044	1,219	1,363
All other U.S.	1,015	1,051	1,032	1,116	1,089	1,003	1,162	1,310
Foreign	56	57	47	74	44	41	57	53
Self-support	16,416	17,796	17,835	18,498	18,705	18,618	18,185	17,807
Social sciences:								
Total, all sources	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Federal, total	3,184	3,410	3,491	3,529	3,523	3,247	3,177	3,116
Dept. of Defense	247	247	273	267	281	225	203	221
Dept. of HHS, total	369	421	417	423	474	327	330	350
NIH	268	297	303	286	321	266	262	261
Other HHS	101	124	114	137	153	61	68	89
NASA ¹	N/A	N/A	N/A	N/A	N/A	52	65	93
NSF	560	645	645	675	675	746	687	719
USDA	379	392	393	434	428	378	389	347
All other Federal	1,629	1,705	1,763	1,730	1,665	1,519	1,503	1,386
Institutional support	23,842	24,439	24,645	24,709	25,100	25,444	25,111	25,156
Other outside support, total	3,288	3,614	3,561	3,729	3,464	3,543	3,321	3,255
All other U.S.	1,833	2,107	2,235	2,353	2,102	2,178	2,052	2,186
Foreign	1,455	1,507	1,326	1,376	1,362	1,365	1,269	1,069
Self-support	20,317	22,794	23,923	24,305	24,143	24,678	23,879	22,243
Engineering, total:								
Total, all sources	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Federal, total	15,982	16,564	16,890	16,851	16,361	15,833	15,906	15,659
Dept. of Defense	4,871	4,953	5,139	4,717	4,810	4,538	4,804	4,359
Dept. of HHS, total	810	901	924	906	918	835	916	981
NIH	724	798	794	782	768	731	767	829
Other HHS	86	103	130	124	150	104	149	152
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,093	1,261	1,243
NSF	4,297	4,605	4,561	4,764	4,580	4,593	4,618	4,751
USDA	274	358	306	345	341	291	214	183
All other Federal	5,730	5,747	5,960	6,119	5,712	4,483	4,093	4,142
Institutional support	24,616	24,926	24,959	24,565	23,832	23,392	23,768	23,228
Other outside support, total	10,626	10,550	9,717	9,378	9,107	8,874	8,952	9,786
All other U.S.	8,536	8,519	8,073	7,766	7,452	7,337	7,545	8,593
Foreign	2,090	2,031	1,644	1,612	1,655	1,537	1,407	1,193
Self-support	19,810	22,386	22,231	20,772	18,474	17,752	16,960	17,076

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary source of support: 1991-1998**

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Chemical engineering:								
Total, all sources	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Federal, total	1,598	1,654	1,748	1,716	1,752	1,786	1,649	1,695
Dept. of Defense	134	123	139	128	164	169	169	161
Dept. of HHS, total	132	166	141	173	163	162	137	149
NIH	128	146	119	143	136	148	121	119
Other HHS	4	20	22	30	27	14	16	30
NASA ¹	N/A	N/A	N/A	N/A	N/A	91	80	98
NSF	664	699	730	749	759	777	708	760
USDA	16	38	52	54	66	34	25	25
All other Federal	652	628	686	612	600	553	530	502
Institutional support	2,282	2,308	2,340	2,420	2,278	2,154	2,229	2,113
Other outside support, total	1,228	1,170	1,059	1,145	1,080	1,113	1,127	939
All other U.S.	1,111	1,072	960	1,041	942	957	947	826
Foreign	117	98	99	104	138	156	180	113
Self-support	680	814	894	824	847	856	779	854
Civil engineering:								
Total, all sources	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Federal, total	1,752	2,028	1,982	2,090	1,970	1,886	1,807	1,687
Dept. of Defense	273	349	328	321	290	215	232	192
Dept. of HHS, total	35	43	38	45	41	39	47	58
NIH	31	38	30	37	31	33	41	47
Other HHS	4	5	8	8	10	6	6	11
NASA ¹	N/A	N/A	N/A	N/A	N/A	117	121	61
NSF	498	532	522	587	530	534	529	547
USDA	51	80	63	65	53	70	40	28
All other Federal	895	1,024	1,031	1,072	1,056	911	838	801
Institutional support	4,204	4,391	4,579	4,742	4,874	4,754	4,685	4,537
Other outside support, total	1,339	1,477	1,267	1,233	1,163	1,154	1,079	1,098
All other U.S.	918	1,031	972	942	875	911	859	919
Foreign	421	446	295	291	288	243	220	179
Self-support	4,033	4,558	4,630	4,576	4,241	3,997	3,697	3,724
Electrical engineering:								
Total, all sources	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Federal, total	3,866	4,061	4,106	4,082	4,057	3,985	4,428	4,397
Dept. of Defense	1,644	1,700	1,764	1,664	1,706	1,651	1,969	1,839
Dept. of HHS, total	85	90	103	100	113	93	118	132
NIH	76	81	86	83	84	71	71	104
Other HHS	9	9	17	17	29	22	47	28
NASA ¹	N/A	N/A	N/A	N/A	N/A	173	229	242
NSF	1,278	1,388	1,285	1,343	1,325	1,319	1,351	1,317
USDA	18	24	11	24	34	13	15	12
All other Federal	841	859	943	951	879	736	746	855
Institutional support	6,640	6,856	6,726	6,407	6,245	6,391	6,760	6,509
Other outside support, total	3,024	2,953	2,773	2,620	2,591	2,648	2,727	3,151
All other U.S.	2,492	2,450	2,336	2,218	2,162	2,263	2,390	2,852
Foreign	532	503	437	402	429	385	337	299
Self-support	6,374	7,126	6,765	6,303	5,294	4,965	5,012	5,733
Industrial engineering:								
Total, all sources	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Federal, total	705	650	647	637	657	644	603	602
Dept. of Defense	281	267	249	178	189	209	193	181
Dept. of HHS, total	52	53	78	50	54	49	36	45
NIH	16	22	36	28	27	27	30	38
Other HHS	36	31	42	22	27	22	6	7
NASA ¹	N/A	N/A	N/A	N/A	N/A	27	23	32
NSF	188	165	173	215	173	171	145	176
USDA	5	5	3	1	0	1	1	4
All other Federal	179	160	144	193	241	187	205	164
Institutional support	1,858	1,878	1,949	1,889	1,840	1,782	1,697	1,721
Other outside support, total	496	568	493	551	498	461	503	552
All other U.S.	362	430	404	458	420	355	406	454
Foreign	134	138	89	93	78	106	97	98
Self-support	2,539	2,985	2,813	2,833	2,347	2,241	2,272	2,067

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary source of support: 1991-1998**

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Mechanical engineering:								
Total, all sources	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Federal, total	2,730	2,790	2,999	2,946	2,777	2,602	2,626	2,620
Dept. of Defense	738	730	797	782	823	739	766	728
Dept. of HHS, total	71	87	86	80	93	76	109	112
NIH	58	77	70	71	82	63	70	79
Other HHS	13	10	16	9	11	13	39	33
NASA ¹	N/A	N/A	N/A	N/A	N/A	210	291	290
NSF	732	786	812	800	743	770	841	913
USDA	29	26	9	10	4	13	12	5
All other Federal	1,160	1,161	1,295	1,274	1,114	794	607	572
Institutional support	4,287	4,400	4,231	4,086	3,909	3,954	3,913	3,821
Other outside support, total	1,686	1,618	1,561	1,573	1,601	1,459	1,460	1,606
All other U.S.	1,415	1,401	1,391	1,333	1,347	1,250	1,286	1,462
Foreign	271	217	170	240	254	209	174	144
Self-support	2,984	3,575	3,604	3,270	2,841	2,675	2,433	2,026
Other engineering:								
Total, all sources	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Federal, total	5,331	5,381	5,408	5,380	5,148	4,930	4,793	4,658
Dept. of Defense	1,801	1,784	1,862	1,644	1,638	1,555	1,475	1,258
Dept. of HHS, total	435	462	478	458	454	416	469	485
NIH	415	434	453	420	408	389	434	442
Other HHS	20	28	25	38	46	27	35	43
NASA ¹	N/A	N/A	N/A	N/A	N/A	475	517	520
NSF	937	1,035	1,039	1,070	1,050	1,022	1,044	1,038
USDA	155	185	168	191	184	160	121	109
All other Federal	2,003	1,915	1,861	2,017	1,822	1,302	1,167	1,248
Institutional support	5,345	5,093	5,134	5,021	4,686	4,357	4,484	4,527
Other outside support, total	2,853	2,764	2,564	2,256	2,174	2,039	2,056	2,440
All other U.S.	2,238	2,135	2,010	1,774	1,706	1,601	1,657	2,080
Foreign	615	629	554	482	468	438	399	360
Self-support	3,200	3,328	3,525	2,966	2,904	3,018	2,767	2,672
Total, health fields:								
Total, all sources	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Federal, total	6,968	7,328	7,295	7,777	7,902	7,395	7,758	7,961
Dept. of Defense	417	399	435	382	333	331	320	307
Dept. of HHS, total	5,021	5,154	5,211	5,532	5,677	5,457	5,747	5,894
NIH	1,846	2,050	2,266	2,345	2,439	2,447	2,793	2,888
Other HHS	3,175	3,104	2,945	3,187	3,238	3,010	2,954	3,006
NASA ¹	N/A	N/A	N/A	N/A	N/A	14	21	26
NSF	56	70	89	117	100	82	103	134
USDA	60	69	78	74	55	50	42	48
All other Federal	1,414	1,636	1,482	1,672	1,737	1,461	1,525	1,552
Institutional support	7,480	7,647	8,120	8,461	8,980	9,371	9,665	10,075
Other outside support, total	1,521	1,694	1,743	1,865	2,026	2,025	1,969	2,170
All other U.S.	1,060	1,234	1,300	1,407	1,496	1,595	1,483	1,758
Foreign	461	460	443	458	530	430	486	412
Self-support	13,897	15,430	18,491	20,978	22,987	25,468	26,949	27,886

¹ Data for NASA were not collected separately prior to 1996.

KEY: N/A = Not applicable

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 25. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary mechanism of support: 1991-1998**

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Field and mechanism support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields:								
Total, all types	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Fellowships	26,695	28,630	29,132	28,894	28,891	28,863	28,942	29,099
Traineeships	15,417	15,375	15,458	15,692	15,953	15,488	14,487	14,884
Research assistantships	85,175	88,030	90,156	92,011	89,950	87,695	88,055	88,240
Teaching assistantships	65,229	65,725	67,315	66,869	65,997	65,789	65,467	65,309
Other types of support	114,524	124,849	127,618	128,663	128,357	130,618	130,098	130,077
Total, science and engineering:								
Total, all types	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Fellowships	24,983	26,750	27,142	26,774	26,708	26,389	26,475	26,574
Traineeships	10,466	10,051	10,296	10,344	10,543	10,338	9,659	9,818
Research assistantships	81,214	84,076	86,202	87,633	85,347	83,318	83,143	83,183
Teaching assistantships	62,746	63,221	64,792	64,068	63,164	62,768	62,309	62,127
Other types of support	97,765	106,412	105,598	104,229	101,491	101,381	99,122	97,815
Sciences, total:								
Total, all types	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Fellowships	19,214	20,626	20,905	20,718	20,695	20,720	20,696	21,010
Traineeships	9,351	9,042	9,234	9,411	9,534	9,472	8,791	8,971
Research assistantships	54,438	56,536	58,271	59,551	58,303	56,805	56,225	55,765
Teaching assistantships	51,482	52,274	53,624	53,301	53,004	52,759	52,154	52,051
Other types of support	71,655	77,606	78,199	78,501	77,943	78,587	77,256	75,971
Physical sciences:								
Total, all types	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Fellowships	2,660	2,837	2,729	2,430	2,351	2,203	2,150	2,113
Traineeships	793	707	757	681	677	650	531	482
Research assistantships	12,229	12,445	12,293	12,378	11,848	11,527	11,302	11,087
Teaching assistantships	11,696	11,848	12,129	11,893	11,696	11,247	10,890	10,843
Other types of support	2,739	2,836	2,703	2,661	2,330	2,329	2,019	1,875
Earth, atmospheric, & ocean sciences:								
Total, all types	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Fellowships	896	894	907	865	896	870	815	922
Traineeships	93	120	153	140	131	131	92	114
Research assistantships	4,387	4,615	4,729	4,857	4,659	4,303	4,276	4,120
Teaching assistantships	2,345	2,450	2,519	2,484	2,508	2,530	2,649	2,561
Other types of support	2,652	2,907	3,059	3,124	3,081	2,992	2,718	2,772
Mathematical sciences:								
Total, all types	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Fellowships	1,365	1,416	1,363	1,216	1,297	1,285	1,206	1,109
Traineeships	207	220	258	244	222	179	179	164
Research assistantships	1,356	1,410	1,436	1,534	1,451	1,296	1,389	1,216
Teaching assistantships	7,766	7,739	7,586	7,634	7,293	7,127	6,699	6,588
Other types of support	3,562	3,894	3,887	3,598	3,147	3,079	2,671	2,705
Computer sciences:								
Total, all types	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Fellowships	901	884	808	908	911	930	940	1,011
Traineeships	135	148	229	281	227	210	224	219
Research assistantships	3,565	3,682	3,802	3,903	3,918	3,978	4,043	4,295
Teaching assistantships	3,503	3,548	3,594	3,374	3,373	3,381	3,647	3,780
Other types of support	8,412	9,224	8,941	8,208	8,061	8,674	9,480	10,432
Agricultural sciences:								
Total, all types	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Fellowships	491	505	532	522	492	455	470	479
Traineeships	130	130	171	132	146	137	129	115
Research assistantships	5,002	5,174	5,239	5,385	5,377	5,172	5,088	4,978
Teaching assistantships	782	791	887	886	939	943	961	1,017
Other types of support	2,884	2,852	2,639	2,567	2,666	2,591	2,462	2,411
Biological sciences:								
Total, all types	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Fellowships	4,688	5,058	5,234	5,523	5,386	5,284	5,487	5,654
Traineeships	5,094	4,830	4,918	5,227	5,302	5,342	5,060	5,212
Research assistantships	16,846	17,627	18,853	19,438	19,249	18,676	18,610	18,274
Teaching assistantships	8,797	8,947	9,163	9,339	9,311	9,361	9,199	9,114
Other types of support	7,275	7,927	8,313	8,490	9,082	9,081	8,641	8,754
Psychology:								
Total, all types	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Fellowships	1,691	1,858	1,930	1,847	1,844	1,982	2,145	2,339
Traineeships	1,194	1,173	1,113	1,044	1,081	1,166	1,067	1,113
Research assistantships	4,235	4,304	4,557	4,655	4,585	4,763	4,790	4,814
Teaching assistantships	5,750	5,769	6,253	6,058	6,112	6,148	6,165	6,167
Other types of support	19,388	21,058	20,929	21,684	21,600	21,409	21,440	21,149

See explanatory information, if any, and SOURCE at end of table.

**Table 25. Full-time graduate students in science, engineering, and health fields in all institutions,
by field and primary mechanism of support: 1991-1998**

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Field and mechanism support	1991	1992	1993	1994	1995	1996	1997	1998
Social sciences:								
Total, all types	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Fellowships	6,522	7,174	7,402	7,407	7,518	7,711	7,483	7,383
Traineeships	1,705	1,714	1,635	1,662	1,748	1,657	1,509	1,552
Research assistantships	6,818	7,279	7,362	7,401	7,216	7,090	6,727	6,981
Teaching assistantships	10,843	11,182	11,493	11,633	11,772	12,022	11,944	11,981
Other types of support	24,743	26,908	27,728	28,169	27,976	28,432	27,825	25,873
Engineering, total:								
Total, all types	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Fellowships	5,769	6,124	6,237	6,056	6,013	5,669	5,779	5,564
Traineeships	1,115	1,009	1,062	933	1,009	866	868	847
Research assistantships	26,776	27,540	27,931	28,082	27,044	26,513	26,918	27,418
Teaching assistantships	11,264	10,947	11,168	10,767	10,160	10,009	10,155	10,076
Other types of support	26,110	28,806	27,399	25,728	23,548	22,794	21,866	21,844
Chemical engineering:								
Total, all types	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Fellowships	691	738	719	705	791	763	836	713
Traineeships	173	153	123	98	105	93	94	97
Research assistantships	2,987	3,012	3,120	3,270	3,104	3,052	2,967	2,892
Teaching assistantships	1,006	1,021	1,018	947	909	920	920	895
Other types of support	931	1,022	1,061	1,085	1,048	1,081	967	1,004
Civil engineering:								
Total, all types	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Fellowships	677	802	904	888	918	884	850	802
Traineeships	214	219	210	191	196	178	180	160
Research assistantships	3,565	3,936	4,048	4,254	4,225	4,124	3,965	3,853
Teaching assistantships	1,667	1,648	1,818	1,901	1,846	1,788	1,769	1,752
Other types of support	5,205	5,849	5,478	5,407	5,063	4,817	4,504	4,479
Electrical engineering:								
Total, all types	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Fellowships	1,424	1,502	1,475	1,503	1,446	1,388	1,394	1,322
Traineeships	187	162	191	158	156	152	122	133
Research assistantships	6,556	6,867	6,925	6,855	6,694	6,920	7,552	7,709
Teaching assistantships	3,487	3,451	3,435	3,236	3,106	3,163	3,355	3,341
Other types of support	8,250	9,014	8,344	7,660	6,785	6,366	6,504	7,285
Industrial engineering:								
Total, all types	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Fellowships	260	269	281	270	299	234	239	252
Traineeships	32	27	48	32	37	14	21	24
Research assistantships	1,249	1,235	1,271	1,342	1,339	1,282	1,264	1,400
Teaching assistantships	893	891	935	933	823	784	773	777
Other types of support	3,164	3,659	3,367	3,333	2,844	2,814	2,778	2,489
Mechanical engineering:								
Total, all types	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Fellowships	868	909	926	943	944	907	846	902
Traineeships	179	168	211	187	187	165	215	180
Research assistantships	4,630	4,731	4,787	4,688	4,413	4,272	4,349	4,498
Teaching assistantships	2,205	2,185	2,255	2,069	1,930	1,860	1,887	1,780
Other types of support	3,805	4,390	4,216	3,988	3,654	3,486	3,135	2,713
Other engineering:								
Total, all types	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Fellowships	1,849	1,904	1,932	1,747	1,615	1,493	1,614	1,573
Traineeships	330	280	279	267	328	264	236	253
Research assistantships	7,789	7,759	7,780	7,673	7,269	6,863	6,821	7,066
Teaching assistantships	2,006	1,751	1,707	1,681	1,546	1,494	1,451	1,531
Other types of support	4,755	4,872	4,933	4,255	4,154	4,230	3,978	3,874
Total, health fields:								
Total, all types	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Fellowships	1,712	1,880	1,990	2,120	2,183	2,474	2,467	2,525
Traineeships	4,951	5,324	5,162	5,348	5,410	5,150	4,828	5,066
Research assistantships	3,961	3,954	3,954	4,378	4,603	4,377	4,912	5,057
Teaching assistantships	2,483	2,504	2,523	2,801	2,833	3,021	3,158	3,182
Other types of support	16,759	18,437	22,020	24,434	26,866	29,237	30,976	32,262

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 26. Full-time graduate students in science and engineering fields in all institutions,
by primary mechanism and primary source of support: 1991-1998**

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Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all types:								
Total, all sources	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Federal, total	56,046	58,298	60,393	60,789	59,408	57,857	56,840	56,148
Dept. of Defense	8,711	8,848	9,315	9,067	9,006	8,471	8,732	8,048
Dept. of HHS, total	15,472	16,274	16,827	17,148	17,110	16,914	16,813	16,925
NIH	14,172	15,043	15,871	15,950	15,672	15,485	15,349	15,444
Other HHS	1,300	1,231	956	1,198	1,438	1,429	1,464	1,481
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,295	2,565	2,619
NSF	12,610	13,296	13,441	13,873	13,561	13,330	13,272	13,398
USDA	3,015	3,147	3,246	3,348	3,199	2,954	2,604	2,437
All other Federal	16,238	16,733	17,564	17,353	16,532	13,893	12,854	12,721
Institutional support	117,907	120,276	120,899	120,834	120,417	119,086	119,267	118,815
Other outside support, total	25,549	26,075	24,971	25,390	23,926	23,379	23,081	24,169
All other U.S.	19,367	20,075	19,933	20,130	18,909	18,559	18,754	20,363
Foreign	6,182	6,000	5,038	5,260	5,017	4,820	4,327	3,806
Self-support	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385
Fellowships:								
Total, all sources	24,983	26,750	27,142	26,774	26,708	26,389	26,475	26,574
Federal, total	6,910	7,222	6,998	6,360	6,364	6,434	6,262	6,358
Dept. of Defense	677	648	627	523	470	508	522	536
Dept. of HHS, total	818	985	1,033	1,048	1,167	1,153	1,231	1,291
NIH	722	868	919	917	966	974	1,004	1,063
Other HHS	96	117	114	131	201	179	227	228
NASA ¹	N/A	N/A	N/A	N/A	N/A	410	373	380
NSF	2,233	2,354	2,267	2,275	2,323	2,451	2,309	2,337
USDA	102	113	113	112	136	111	138	139
All other Federal	3,080	3,122	2,958	2,402	2,268	1,801	1,689	1,675
Institutional support	12,314	13,409	13,980	13,928	14,299	14,402	15,241	15,209
Other outside support, total	5,759	6,119	6,164	6,486	6,045	5,553	4,972	5,007
All other U.S.	3,550	3,798	3,702	4,069	3,813	3,402	3,118	3,302
Foreign	2,209	2,321	2,462	2,417	2,232	2,151	1,854	1,705
Self-support	N/A							
Traineeships:								
Total, all sources	10,466	10,051	10,296	10,344	10,543	10,338	9,659	9,818
Federal, total	5,454	5,551	5,773	5,857	5,630	5,515	5,143	5,433
Dept. of Defense	116	94	113	122	104	124	108	64
Dept. of HHS, total	4,384	4,387	4,378	4,493	4,347	4,256	3,977	4,234
NIH	4,084	4,106	4,194	4,206	3,990	3,990	3,793	4,056
Other HHS	300	281	184	287	357	266	184	178
NASA ¹	N/A	N/A	N/A	N/A	N/A	67	76	58
NSF	80	104	165	258	338	431	383	407
USDA	34	28	42	37	18	24	23	14
All other Federal	840	938	1,075	947	823	613	576	656
Institutional support	4,275	3,712	3,635	3,606	4,214	4,254	3,877	3,682
Other outside support, total	737	788	888	881	699	569	639	703
All other U.S.	552	581	594	660	504	385	488	570
Foreign	185	207	294	221	195	184	151	133
Self-support	N/A							
Research assistantships:								
Total, all sources	81,214	84,076	86,202	87,633	85,347	83,318	83,143	83,183
Federal, total	39,352	41,075	43,029	43,895	42,936	41,826	41,510	40,042
Dept. of Defense	5,452	5,703	6,204	6,177	6,261	5,965	6,339	5,816
Dept. of HHS, total	9,958	10,473	10,976	11,233	11,166	11,035	11,098	10,619
NIH	9,099	9,700	10,386	10,518	10,368	10,154	10,146	9,633
Other HHS	859	773	590	715	798	881	952	986
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,775	2,059	2,120
NSF	10,144	10,628	10,769	11,145	10,600	10,223	10,399	10,374
USDA	2,761	2,896	2,964	3,073	2,946	2,707	2,371	2,192
All other Federal	11,037	11,375	12,116	12,267	11,963	10,121	9,244	8,921
Institutional support	29,426	29,953	29,900	30,639	30,152	29,175	29,014	29,835
Other outside support, total	12,436	13,048	13,273	13,099	12,259	12,317	12,619	13,306
All other U.S.	11,630	12,237	12,415	12,336	11,519	11,578	11,879	12,679
Foreign	806	811	858	763	740	739	740	627
Self-support	N/A							

See explanatory information, if any, and SOURCE at end of table.

**Table 26. Full-time graduate students in science and engineering fields in all institutions,
by primary mechanism and primary source of support: 1991-1998**

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Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Teaching assistantships:								
Total, all sources	62,746	63,221	64,792	64,068	63,164	62,768	62,309	62,127
Federal, total	428	574	776	677	646	741	789	984
Dept. of Defense	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dept. of HHS, total	87	166	162	136	113	180	157	232
NIH	74	149	156	127	106	176	127	221
Other HHS	13	17	6	9	7	4	30	11
NASA ¹	N/A	N/A	N/A	N/A	N/A	2	24	23
NSF	73	112	140	107	157	117	81	130
USDA	33	28	46	49	37	42	30	37
All other Federal	235	268	428	385	339	400	497	562
Institutional support	61,810	62,106	63,432	62,781	61,980	61,405	60,928	60,528
Other outside support, total	508	541	584	610	538	622	592	615
All other U.S.	508	541	584	610	538	622	592	615
Foreign	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other types of support:								
Total, all sources	97,765	106,412	105,598	104,229	101,491	101,381	99,122	97,815
Federal, total	3,902	3,876	3,817	4,000	3,832	3,341	3,136	3,331
Dept. of Defense	2,466	2,403	2,371	2,245	2,171	1,874	1,763	1,632
Dept. of HHS, total	225	263	278	238	317	290	350	549
NIH	193	220	216	182	242	191	279	471
Other HHS	32	43	62	56	75	99	71	78
NASA ¹	N/A	N/A	N/A	N/A	N/A	41	33	38
NSF	80	98	100	88	143	108	100	150
USDA	85	82	81	77	62	70	42	55
All other Federal	1,046	1,030	987	1,352	1,139	958	848	907
Institutional support	10,082	11,096	9,952	9,880	9,772	9,850	10,207	9,561
Other outside support, total	6,109	5,579	4,062	4,314	4,385	4,318	4,259	4,538
All other U.S.	3,127	2,918	2,638	2,455	2,535	2,572	2,677	3,197
Foreign	2,982	2,661	1,424	1,859	1,850	1,746	1,582	1,341
Self-support	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385

¹ Data for NASA were not collected separately prior to 1996.

KEY: N/A = Not applicable

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 27. Full-time students in graduate school for the first time in science, engineering, and health fields in all institutions, by detailed field: 1991-1998

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	93,172	95,832	92,798	92,221	89,445	88,953	89,033	90,868
Total, science and engineering fields	81,458	83,134	79,313	78,056	74,384	73,479	73,544	74,431
Sciences, total	58,914	60,890	58,975	58,287	56,310	55,472	54,737	55,195
Physical sciences, total	7,107	6,910	6,690	6,454	6,131	6,019	6,035	5,945
Astronomy	153	161	153	164	147	157	125	162
Chemistry	4,088	3,910	3,842	3,813	3,712	3,707	3,764	3,689
Physics	2,820	2,773	2,642	2,381	2,188	2,088	2,074	2,046
Physical sciences, n.e.c.	46	66	53	96	84	67	72	48
Earth, atmos., & ocean sci., total	2,909	3,018	2,987	3,012	2,805	2,640	2,693	2,881
Atmospheric sciences	224	235	214	224	198	213	224	189
Geosciences	1,506	1,506	1,506	1,522	1,427	1,328	1,349	1,349
Oceanography	472	501	487	518	418	370	408	470
Earth, atmos., & ocean sci., n.e.c.	707	776	780	748	762	729	712	873
Mathematical sciences	4,350	4,443	4,044	3,963	3,578	3,450	3,302	3,338
Computer sciences	5,558	5,477	4,741	4,754	4,782	4,908	5,019	5,753
Agricultural sciences	2,434	2,219	2,301	2,301	2,240	2,122	2,103	2,252
Biological sciences, total	10,676	10,890	11,114	11,376	11,417	10,832	11,108	11,407
Anatomy	248	231	199	222	252	260	214	213
Biochemistry	1,034	1,027	1,089	1,034	981	945	994	1,021
Biology	2,709	2,789	2,752	2,733	2,688	2,574	2,671	2,483
Biometry/epidemiology	461	603	667	657	738	671	661	813
Biophysics	157	145	143	149	153	155	133	158
Botany	548	548	517	483	443	443	415	449
Cell biology	608	655	697	761	717	743	800	864
Ecology	190	212	250	285	308	245	247	259
Entomology/parasitology	230	216	239	206	184	202	194	233
Genetics	312	296	342	345	344	387	436	395
Microbio., immunology, & virology	900	873	845	906	910	848	871	856
Nutrition	818	764	836	795	854	825	789	937
Pathology	274	268	324	334	296	291	350	279
Pharmacology	542	550	513	530	498	420	454	509
Physiology	596	589	616	649	811	725	633	654
Zoology	464	393	379	348	356	327	326	280
Biosciences, n.e.c.	585	731	706	939	884	771	920	1,004
Psychology	9,457	10,172	9,686	9,530	9,241	9,152	8,803	8,645
Social sciences, total	16,423	17,761	17,412	16,897	16,116	16,349	15,674	14,974
Agricultural economics	623	683	570	533	492	436	467	417
Anthropology (cultural & social)	1,271	1,289	1,309	1,331	1,247	1,252	1,196	1,219
Economics (except agricultural)	2,893	3,007	2,837	2,793	2,605	2,466	2,368	2,352
Geography	827	886	999	959	836	870	914	805
Linguistics	675	650	611	612	594	620	563	485
Political science	6,121	6,714	6,567	6,131	5,916	5,842	5,264	4,946
Sociology	1,550	1,774	1,732	1,548	1,503	1,505	1,525	1,437
Sociology/anthropology	160	202	200	229	147	210	171	177
Social sciences, other	2,303	2,556	2,587	2,761	2,776	3,148	3,206	3,136
Engineering, total	22,544	22,244	20,338	19,769	18,074	18,007	18,807	19,236
Aerospace engineering	1,125	1,053	963	793	650	687	735	717
Agricultural engineering	207	193	161	193	177	183	165	155
Biomedical engineering	516	599	601	566	592	572	671	677
Chemical engineering	1,517	1,480	1,520	1,461	1,418	1,470	1,462	1,496
Civil engineering	4,210	4,331	4,019	4,194	3,825	3,845	3,748	3,741
Electrical engineering	6,243	6,112	5,485	5,452	4,975	4,859	5,513	5,726
Engineering science	312	347	316	313	275	273	274	308
Industrial/manufacturing eng.	2,045	1,926	1,647	1,721	1,523	1,591	1,532	1,528
Mechanical engineering	3,771	3,820	3,514	3,218	2,832	2,785	2,829	2,923
Metallurgical/materials eng.	997	997	871	842	805	777	850	886
Nuclear engineering	260	283	258	208	187	182	178	153
Engineering, other	1,341	1,103	983	808	815	783	850	926
Total, health fields	11,714	12,698	13,485	14,165	15,061	15,474	15,489	16,437
Clinical fields	787	836	795	780	811	885	1,018	890
Dental sciences	339	410	421	405	373	386	377	400
Nursing	2,407	2,391	2,420	2,615	2,685	2,653	2,871	2,830
Pharmaceutical sciences	557	480	481	489	463	521	490	588
Preventive medicine/community health	1,939	2,146	2,299	2,204	2,587	2,300	2,133	2,626
Speech pathology/audiology	2,897	3,187	3,328	3,519	3,615	3,911	3,830	4,075
Veterinary sciences	152	155	138	158	157	119	128	189
Other health fields	2,636	3,093	3,603	3,995	4,370	4,699	4,642	4,839

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 28. Graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

Page 1 of 2

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	485,754	24,249	2,050	31,709	18,879	279,041	22,777	107,049
Total, science and engineering fields	405,280	19,653	1,614	26,844	15,595	220,700	18,898	101,976
Sciences, total	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
Physical sciences, total	30,565	910	64	1,760	831	15,197	1,050	10,753
Astronomy	820	9	2	32	12	507	45	213
Chemistry	18,454	632	46	1,179	561	9,454	551	6,031
Physics	10,809	242	14	528	226	4,967	402	4,430
Physical sciences, n.e.c.	482	27	2	21	32	269	52	79
Earth, atmos., & ocean sci.,total	14,364	206	85	425	390	10,175	581	2,502
Atmospheric sciences	965	8	2	55	13	601	31	255
Geosciences	6,705	59	36	153	154	4,774	285	1,244
Oceanography	2,545	25	16	62	106	1,720	83	533
Earth, atmos., & ocean sci., n.e.c.	4,149	114	31	155	117	3,080	182	470
Mathematical sciences, total	16,463	613	34	1,174	454	8,081	692	5,415
Mathematics & applied mathematics	13,816	562	30	937	404	6,887	614	4,382
Statistics	2,647	51	4	237	50	1,194	78	1,033
Computer sciences	37,850	1,352	93	5,278	754	13,937	2,279	14,157
Agricultural sciences	11,811	310	69	304	383	7,857	294	2,594
Biological sciences, total	57,060	2,186	192	4,426	2,057	34,553	2,214	11,432
Anatomy	1,015	41	3	81	15	634	37	204
Biochemistry	5,138	143	13	529	159	2,731	129	1,434
Biology	14,257	742	51	822	685	9,081	777	2,099
Biometry/epidemiology	3,484	181	6	357	153	1,883	227	677
Biophysics	737	18	1	90	14	377	71	166
Botany	2,328	59	3	92	56	1,381	64	673
Cell biology	4,079	113	11	423	120	2,446	121	845
Ecology	1,696	21	5	50	43	1,348	58	171
Entomology/parasitology	1,168	11	3	37	26	778	22	291
Genetics	1,705	43	4	126	51	1,055	32	394
Microbio., immunology, & virology	4,824	174	19	439	185	2,874	144	989
Nutrition	4,431	213	16	247	168	2,628	92	1,067
Pathology	1,580	44	10	166	42	961	69	288
Pharmacology	2,713	136	6	297	88	1,557	57	572
Physiology	2,169	95	10	265	70	1,238	53	438
Zoology	1,676	17	9	62	36	1,283	73	196
Biosciences, n.e.c.	4,060	135	22	343	146	2,298	188	928
Psychology, total	53,055	3,845	315	2,038	3,315	37,886	3,462	2,194
Psychology, general	17,559	1,524	94	709	975	12,654	882	721
Clinical psychology	12,839	711	113	559	1,121	9,412	559	364
Psychology, n.e.c.	22,657	1,610	108	770	1,219	15,820	2,021	1,109
Social sciences, total	83,825	7,404	525	3,379	4,499	49,023	4,111	14,884
Agricultural economics	1,995	70	5	54	42	860	60	904
Anthropology (cultural & social)	7,577	266	119	241	344	5,549	319	739
Economics (except agricultural)	10,699	317	16	611	276	3,818	413	5,248
Geography	4,325	108	13	101	98	3,210	250	545
History and philosophy of science	518	12	1	23	12	387	16	67
Linguistics	2,883	46	9	184	150	1,358	116	1,020
Political science	30,680	3,751	173	1,182	1,980	18,452	1,598	3,544
Sociology	9,098	1,114	68	406	602	5,494	305	1,109
Sociology/anthropology	857	99	8	9	41	523	67	110
Social sciences, n.e.c.	15,193	1,621	113	568	954	9,372	967	1,598
Engineering, total	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
Aerospace engineering	3,137	34	7	140	76	1,391	72	1,417
Agricultural engineering	925	27	4	43	15	403	27	406
Biomedical engineering	2,905	86	7	268	80	1,623	113	728
Chemical engineering	7,060	185	21	469	179	3,105	230	2,871
Civil engineering	16,374	410	43	1,094	722	8,584	609	4,912
Electrical engineering	31,398	868	33	3,509	815	10,622	1,501	14,050
Engineering science	1,701	39	7	187	42	843	31	552
Industrial/manufacturing eng.	11,059	455	30	595	355	5,643	593	3,388
Mechanical engineering	14,696	412	25	973	389	6,636	611	5,650
Metallurgical/materials eng.	4,644	74	33	272	84	2,053	127	2,001
Mining engineering	304	1	0	57	4	151	15	76
Nuclear engineering	821	13	2	36	22	449	5	294
Petroleum engineering	571	5	2	7	6	101	2	448
Engineering, n.e.c.	4,692	218	23	410	123	2,387	279	1,252

See explanatory information, if any, and SOURCE at end of table.

Table 28. Graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

Page 2 of 2

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields	80,474	4,596	436	4,865	3,284	58,341	3,879	5,073
Medical fields, total	16,341	1,312	101	1,852	927	9,550	892	1,707
Anesthesiology	907	40	4	21	11	631	191	9
Cardiology	51	0	0	9	2	25	0	15
Oncology/cancer research	209	8	1	44	7	115	3	31
Endocrinology	58	2	0	16	2	19	2	17
Gastroenterology	6	0	0	1	1	2	2	0
Hematology	1	0	0	0	0	1	0	0
Neurology	1,765	47	11	194	76	1,161	43	233
Obstetrics and gynecology	13	0	0	1	0	12	0	0
Ophthalmology	38	0	0	4	0	11	0	23
Otorhinolaryngology	0	0	0	0	0	0	0	0
Pediatrics	314	28	8	27	9	195	19	28
Preventive medicine/community health	11,142	1,112	69	1,251	749	6,280	474	1,207
Psychiatry	136	7	1	6	3	117	1	1
Pulmonary disease	0	0	0	0	0	0	0	0
Radiology	249	6	0	30	15	161	3	34
Surgery	174	4	1	22	4	134	3	6
Clinical medicine, n.e.c.	1,278	58	6	226	48	686	151	103
Other health fields, total	64,133	3,284	335	3,013	2,357	48,791	2,987	3,366
Dental sciences	1,471	34	1	144	120	811	19	342
Nursing	25,499	1,500	172	977	814	20,172	1,397	467
Pharmaceutical sciences	3,407	200	9	319	137	1,439	118	1,185
Speech pathology/audiology	13,315	547	59	262	469	11,074	506	398
Veterinary sciences	1,192	44	7	47	29	779	7	279
Health related, n.e.c.	19,249	959	87	1,264	788	14,516	940	695

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 29. Male graduate students in science, engineering, and health fields in all institutions,
by detailed field, citizenship, and racial/ethnic background
of U.S. citizens or permanent residents : 1998**

Page 1 of 2

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	261,240	9,262	898	17,658	8,786	138,238	11,940	74,458
Total, science and engineering fields	241,828	8,347	802	16,003	7,891	125,822	11,004	71,959
Sciences, total	160,615	6,406	628	9,821	5,669	89,942	7,546	40,603
Physical sciences, total	21,831	479	41	1,150	524	11,035	759	7,843
Astronomy	590	6	1	17	10	362	30	164
Chemistry	11,911	301	28	694	314	6,287	368	3,919
Physics	9,029	159	10	432	183	4,208	325	3,712
Physical sciences, n.e.c.	301	13	2	7	17	178	36	48
Earth, atmos., & ocean sci., total	8,733	105	45	238	209	6,063	334	1,739
Atmospheric sciences	731	5	2	38	11	493	15	167
Geosciences	4,379	35	18	96	88	3,024	168	950
Oceanography	1,393	10	9	36	47	898	42	351
Earth, atmos., & ocean sci., n.e.c.	2,230	55	16	68	63	1,648	109	271
Mathematical sciences	10,483	339	16	702	276	5,045	467	3,638
Computer sciences	27,206	768	68	3,387	560	10,787	1,633	10,003
Agricultural sciences	7,112	147	44	155	208	4,630	161	1,767
Biological sciences, total	28,003	791	88	2,094	932	17,022	1,128	5,948
Anatomy	551	19	1	46	11	324	21	129
Biochemistry	2,913	67	9	285	84	1,593	70	805
Biology	7,070	262	24	367	314	4,623	409	1,071
Biometry/epidemiology	1,343	59	2	111	48	696	87	340
Biophysics	528	10	0	72	13	266	46	121
Botany	1,210	29	1	39	27	711	31	372
Cell biology	2,091	52	4	205	60	1,276	58	436
Ecology	862	12	2	21	23	672	33	99
Entomology/parasitology	754	5	1	20	18	487	12	211
Genetics	735	14	1	61	24	422	14	199
Microbio., immunology, & virology	2,428	63	9	206	82	1,477	76	515
Nutrition	1,069	43	3	56	27	547	29	364
Pathology	776	14	7	84	19	460	37	155
Pharmacology	1,398	51	2	149	43	830	31	292
Physiology	1,275	37	5	168	43	738	30	254
Zoology	941	6	6	32	18	719	43	117
Biosciences, n.e.c.	2,059	48	11	172	78	1,181	101	468
Psychology	15,314	920	90	554	909	11,028	1,009	804
Social sciences, total	41,933	2,857	236	1,541	2,051	24,332	2,055	8,861
Agricultural economics	1,315	45	2	29	21	565	39	614
Anthropology (cultural & social)	3,021	82	49	74	149	2,190	125	352
Economics (except agricultural)	7,239	191	11	386	178	2,594	286	3,593
Geography	2,662	65	8	53	64	1,971	162	339
Linguistics	976	14	2	54	33	464	42	367
Political science	15,833	1,441	89	549	901	9,873	854	2,126
Sociology	3,366	387	23	144	243	1,949	109	511
Sociology/anthropology	335	42	7	2	17	194	26	47
Social sciences, other	7,186	590	45	250	445	4,532	412	912
Engineering, total	81,213	1,941	174	6,182	2,222	35,880	3,458	31,356
Aerospace engineering	2,755	27	7	119	67	1,216	60	1,259
Agricultural engineering	682	17	2	30	10	300	19	304
Biomedical engineering	2,035	42	5	182	53	1,140	79	534
Chemical engineering	5,339	105	13	321	114	2,403	176	2,207
Civil engineering	12,294	277	31	781	503	6,397	446	3,859
Electrical engineering	26,562	675	25	2,766	692	9,455	1,276	11,673
Engineering science	1,370	32	6	143	30	693	25	441
Industrial eng./manufacturing eng.	8,664	249	20	448	241	4,402	489	2,815
Mechanical engineering	12,934	308	20	835	332	5,849	549	5,041
Metallurgical/materials eng.	3,529	43	27	197	54	1,558	98	1,552
Nuclear engineering	687	9	1	28	18	378	5	248
Engineering, other	4,362	157	17	332	108	2,089	236	1,423

See explanatory information, if any, and SOURCE at end of table.

**Table 29. Male graduate students in science, engineering, and health fields in all institutions,
by detailed field, citizenship, and racial/ethnic background
of U.S. citizens or permanent residents : 1998**

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields	19,412	915	96	1,655	895	12,416	936	2,499
Clinical fields	1,611	60	4	224	52	921	216	134
Dental sciences	919	17	1	82	66	535	9	209
Nursing	2,129	81	18	76	129	1,671	107	47
Pharmaceutical sciences	1,690	77	1	150	40	725	59	638
Preventive medicine/community health	4,069	308	28	470	243	2,152	183	685
Speech pathology/audiology	1,094	47	7	33	47	809	45	106
Veterinary sciences	564	19	2	26	17	317	5	178
Other health fields	7,336	306	35	594	301	5,286	312	502

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 30. Female graduate students in science, engineering, and health fields in all institutions,
by detailed field, citizenship, and racial/ethnic background
of U.S. citizens or permanent residents : 1998**

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	224,514	14,987	1,152	14,051	10,093	140,803	10,837	32,591
Total, science and engineering fields	163,452	11,306	812	10,841	7,704	94,878	7,894	30,017
Sciences, total	144,378	10,420	749	8,963	7,014	86,767	7,137	23,328
Physical sciences, total	8,734	431	23	610	307	4,162	291	2,910
Astronomy	230	3	1	15	2	145	15	49
Chemistry	6,543	331	18	485	247	3,167	183	2,112
Physics	1,780	83	4	96	43	759	77	718
Physical sciences, n.e.c.	181	14	0	14	15	91	16	31
Earth, atmos., & ocean sci., total	5,631	101	40	187	181	4,112	247	763
Atmospheric sciences	234	3	0	17	2	108	16	88
Geosciences	2,326	24	18	57	66	1,750	117	294
Oceanography	1,152	15	7	26	59	822	41	182
Earth, atmos., & ocean sci., n.e.c.	1,919	59	15	87	54	1,432	73	199
Mathematical sciences	5,980	274	18	472	178	3,036	225	1,777
Computer sciences	10,644	584	25	1,891	194	3,150	646	4,154
Agricultural sciences	4,699	163	25	149	175	3,227	133	827
Biological sciences, total	29,057	1,395	104	2,332	1,125	17,531	1,086	5,484
Anatomy	464	22	2	35	4	310	16	75
Biochemistry	2,225	76	4	244	75	1,138	59	629
Biology	7,187	480	27	455	371	4,458	368	1,028
Biometry/epidemiology	2,141	122	4	246	105	1,187	140	337
Biophysics	209	8	1	18	1	111	25	45
Botany	1,118	30	2	53	29	670	33	301
Cell biology	1,988	61	7	218	60	1,170	63	409
Ecology	834	9	3	29	20	676	25	72
Entomology/parasitology	414	6	2	17	8	291	10	80
Genetics	970	29	3	65	27	633	18	195
Microbio., immunology, & virology	2,396	111	10	233	103	1,397	68	474
Nutrition	3,362	170	13	191	141	2,081	63	703
Pathology	804	30	3	82	23	501	32	133
Pharmacology	1,315	85	4	148	45	727	26	280
Physiology	894	58	5	97	27	500	23	184
Zoology	735	11	3	30	18	564	30	79
Biosciences, n.e.c.	2,001	87	11	171	68	1,117	87	460
Psychology	37,741	2,925	225	1,484	2,406	26,858	2,453	1,390
Social sciences, total	41,892	4,547	289	1,838	2,448	24,691	2,056	6,023
Agricultural economics	680	25	3	25	21	295	21	290
Anthropology (cultural & social)	4,556	184	70	167	195	3,359	194	387
Economics (except agricultural)	3,460	126	5	225	98	1,224	127	1,655
Geography	1,663	43	5	48	34	1,239	88	206
Linguistics	1,907	32	7	130	117	894	74	653
Political science	14,847	2,310	84	633	1,079	8,579	744	1,418
Sociology	5,732	727	45	262	359	3,545	196	598
Sociology/anthropology	522	57	1	7	24	329	41	63
Social sciences, other	8,525	1,043	69	341	521	5,227	571	753
Engineering, total	19,074	886	63	1,878	690	8,111	757	6,689
Aerospace engineering	382	7	0	21	9	175	12	158
Agricultural engineering	243	10	2	13	5	103	8	102
Biomedical engineering	870	44	2	86	27	483	34	194
Chemical engineering	1,721	80	8	148	65	702	54	664
Civil engineering	4,080	133	12	313	219	2,187	163	1,053
Electrical engineering	4,836	193	8	743	123	1,167	225	2,377
Engineering science	331	7	1	44	12	150	6	111
Industrial eng./manufacturing eng.	2,395	206	10	147	114	1,241	104	573
Mechanical engineering	1,762	104	5	138	57	787	62	609
Metallurgical/materials eng.	1,115	31	6	75	30	495	29	449
Nuclear engineering	134	4	1	8	4	71	0	46
Engineering, other	1,205	67	8	142	25	550	60	353

See explanatory information, if any, and SOURCE at end of table.

**Table 30. Female graduate students in science, engineering, and health fields in all institutions,
by detailed field, citizenship, and racial/ethnic background
of U.S. citizens or permanent residents : 1998**

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields	61,062	3,681	340	3,210	2,389	45,925	2,943	2,574
Clinical fields	1,823	93	17	183	50	1,188	159	133
Dental sciences	552	17	0	62	54	276	10	133
Nursing	23,370	1,419	154	901	685	18,501	1,290	420
Pharmaceutical sciences	1,717	123	8	169	97	714	59	547
Preventive medicine/community health	7,073	804	41	781	506	4,128	291	522
Speech pathology/audiology	12,221	500	52	229	422	10,265	461	292
Veterinary sciences	628	25	5	21	12	462	2	101
Other health fields	13,678	700	63	864	563	10,391	671	426

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
New England	21,584	534	74	1,131	499	11,612	1,618	6,116
Connecticut	5,074	145	8	227	127	2,859	285	1,423
Central Connecticut State University	54	2	0	2	2	40	3	5
Connecticut College	25	0	0	1	0	24	0	0
Quinnipiac College	4	0	0	1	0	3	0	0
Rensselaer at Hartford	508	6	0	30	7	309	73	83
Southern Connecticut State University	333	28	0	4	13	264	21	3
St. Joseph College	66	1	0	1	0	64	0	0
Trinity College	28	3	0	1	1	20	3	0
University of Bridgeport	266	0	1	22	1	40	0	202
University of Connecticut	1,407	30	3	65	37	836	5	431
University of Hartford	264	20	1	11	18	205	0	9
University of New Haven	748	28	0	20	6	488	15	191
Wesleyan University	117	3	0	6	4	51	3	50
Western Connecticut State University	25	0	0	1	0	21	3	0
Yale University	1,229	24	3	62	38	494	159	449
Maine	450	2	2	5	0	298	39	104
University of Maine	450	2	2	5	0	298	39	104
University of New England	0	0	0	0	0	0	0	0
Massachusetts	13,372	330	55	808	330	6,696	1,175	3,978
American International College	184	1	0	0	0	170	0	13
Anna Maria College	50	0	0	0	0	47	3	0
Assumption College	48	0	0	0	0	26	22	0
Boston College	454	17	0	19	23	268	2	125
Boston University	2,082	34	2	145	41	691	572	597
Brandeis University	550	9	0	50	18	266	5	202
Bridgewater State College	81	1	1	2	0	64	8	5
Clark University	277	3	1	6	7	132	23	105
Emerson College	0	0	0	0	0	0	0	0
Framingham State College	2	2	0	0	0	0	0	0
Harvard University	2,852	107	15	210	95	1,421	236	768
MGH Institute of Health Professions	0	0	0	0	0	0	0	0
Mass College of Pharmacy/Allied Health	23	0	0	1	0	4	0	18
Massachusetts Institute of Technology	1,812	47	5	140	45	913	35	627
Mount Holyoke College	3	1	0	0	0	2	0	0
Northeastern University	718	18	6	19	16	292	67	300
Salem State College	22	0	0	0	0	0	2	20
Smith College	4	0	0	0	0	2	0	2
Tufts University	597	12	0	57	17	402	1	108
University of Massachusetts	2,246	54	9	105	56	1,221	111	690
University of Massachusetts Dartmouth	171	3	1	5	1	84	4	73
University of Massachusetts Lowell	794	16	0	39	6	458	82	193
Western New England College	0	0	0	0	0	0	0	0
Williams College	21	0	0	0	0	0	0	21
Woods Hole Oceanographic Institution	105	0	2	5	2	69	0	27
Worcester Polytechnic Institute	263	5	13	4	3	154	0	84
Worcester State College	13	0	0	1	0	10	2	0
New Hampshire	921	9	3	28	11	599	69	202
Dartmouth College	252	3	3	12	2	184	0	48
Rivier College	96	0	0	4	0	27	26	39
University of New Hampshire	573	6	0	12	9	388	43	115
Rhode Island	1,248	32	4	42	20	750	50	350
Brown University	619	16	1	21	8	291	30	252
Rhode Island College	49	0	1	1	0	40	7	0
University of Rhode Island	580	16	2	20	12	419	13	98
Vermont	519	16	2	21	11	410	0	59
Goddard College	68	3	0	8	4	50	0	3

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Vermont, continued:								
Marlboro College	1	0	0	0	0	1	0	0
Middlebury College	0	0	0	0	0	0	0	0
University of Vermont	450	13	2	13	7	359	0	56
Middle Atlantic	53,221	3,066	103	3,874	1,929	27,749	4,340	12,160
New Jersey	7,412	327	11	743	233	3,424	647	2,027
College of New Jersey, The	0	0	0	0	0	0	0	0
Drew University	0	0	0	0	0	0	0	0
Fairleigh Dickinson University	781	29	2	39	20	401	82	208
Kean University	347	46	0	38	23	213	27	0
Monmouth University	91	2	0	11	2	17	15	44
Montclair State University	441	11	0	58	15	277	68	12
New Jersey Institute of Technology	1,003	39	1	179	40	142	176	426
Princeton University	924	20	1	53	19	460	14	357
Rutgers the State Univ of New Jersey	2,543	121	3	190	65	1,319	99	746
Seton Hall University	543	40	3	48	17	270	157	8
Stevens Institute of Technology	505	6	0	96	14	224	2	163
Univ of Med and Dentistry of New Jersey	214	12	1	29	16	86	7	63
William Paterson U of NJ	20	1	0	2	2	15	0	0
New York	32,298	2,189	65	2,309	1,441	15,718	3,101	7,475
Adelphi University	355	12	0	14	18	194	102	15
Albany Medical College	80	4	0	8	2	42	3	21
Alfred University	64	1	0	1	0	62	0	0
CUNY Bernard Baruch College	511	83	1	75	46	86	169	51
CUNY Brooklyn College	493	134	1	76	21	131	77	53
CUNY City College	762	137	0	88	111	215	19	192
CUNY College of Staten Island	66	1	0	16	0	18	31	0
CUNY Graduate School and Univ Center	1,905	83	3	67	85	1,158	50	459
CUNY Herbert H. Lehman College	57	6	0	8	10	8	15	10
CUNY Hunter College	206	9	0	23	15	106	32	21
CUNY John Jay College of Crim Justice	971	197	1	28	117	562	54	12
CUNY Mt. Sinai School of Medicine	192	9	0	38	4	79	0	62
CUNY Queens College	604	46	1	176	30	171	63	117
Clarkson University	53	1	0	1	0	21	0	30
College of New Rochelle	151	20	0	1	7	45	78	0
College of St Rose	125	3	0	1	2	102	16	1
Columbia Univ in the City of New York	1,846	39	1	189	52	788	63	714
Cooper Union	0	0	0	0	0	0	0	0
Cornell University	2,602	67	8	174	80	1,218	0	1,055
Fordham University	458	14	0	0	32	215	104	93
Hofstra University	360	4	0	6	2	123	216	9
Iona College	164	8	0	13	5	48	90	0
Ithaca College	0	0	0	0	0	0	0	0
Long Island University	935	271	4	86	57	402	64	51
Manhattan College	4	0	0	1	1	1	1	0
Marist College	289	9	0	55	8	204	13	0
New School University	1,000	83	1	37	71	451	84	273
New York Institute of Technology	521	44	3	75	25	207	2	165
New York Medical College	174	9	0	20	4	71	28	42
New York University	2,914	180	4	241	106	1,269	318	796
Niagara University	19	2	0	1	0	16	0	0
Pace University	561	39	0	37	19	192	198	76
Polytechnic University	478	11	0	59	9	114	218	67
Pratt Institute	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute	425	11	0	12	4	262	2	134
Rochester Institute of Technology	349	7	0	23	6	189	24	100
Russell Sage College	83	2	0	0	0	29	52	0
SUNY Health Science Center at Syracuse	72	0	0	4	0	55	0	13
SUNY College at Brockport	295	2	0	3	1	280	9	0
SUNY College at Buffalo	22	2	1	0	0	14	1	4
SUNY College at Cortland	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
New York, continued:								
SUNY College at Fredonia	40	0	0	0	0	40	0	0
SUNY College at Geneseo	3	0	0	0	0	3	0	0
SUNY College at Oneonta	4	0	0	0	0	4	0	0
SUNY College at Oswego	132	9	0	0	2	121	0	0
SUNY College at Plattsburgh	18	0	0	0	0	13	0	5
SUNY College at Potsdam	2	0	0	0	0	2	0	0
SUNY College of Env Science and Forestry	327	4	0	2	6	250	0	65
SUNY College of Optometry	0	0	0	0	0	0	0	0
SUNY Health Science Center at Brooklyn	66	2	0	8	0	12	1	43
SUNY Inst of Technology at Utica-Rome	56	0	0	4	1	44	3	4
SUNY at Albany	2,079	112	5	26	75	1,163	335	363
SUNY at Binghamton	830	39	3	22	36	467	0	263
SUNY at Buffalo	1,682	56	6	119	38	947	17	499
SUNY at New Paltz	128	2	0	8	0	79	0	39
SUNY at Stony Brook	1,607	45	3	124	40	721	8	666
Saint John's University	466	48	0	25	44	249	50	50
Sarah Lawrence College	55	3	1	3	0	35	0	13
St. Bonaventure University	9	0	0	0	0	9	0	0
Syracuse University	1,000	47	10	30	44	451	246	172
Teachers College, Columbia University	1,998	226	6	177	133	1,035	226	195
The Rockefeller University	110	3	0	18	9	34	14	32
Union College	14	0	0	2	0	11	0	1
University of Rochester	852	13	1	45	13	476	1	303
Vassar College	0	0	0	0	0	0	0	0
Wagner College	20	0	1	1	1	17	0	0
Yeshiva University	634	30	0	38	49	387	4	126
Pennsylvania	13,511	550	27	822	255	8,607	592	2,658
Allegheny University of Health Sciences	544	39	3	60	10	378	10	44
Bloomsburg University of Pennsylvania	7	0	0	0	0	7	0	0
Bryn Mawr College	97	3	1	3	0	78	0	12
Bucknell University	22	0	0	0	0	19	0	3
California University of Pennsylvania	175	4	0	0	0	151	0	20
Carnegie Mellon University	1,306	49	3	101	27	686	66	374
Clarion University of Pennsylvania	38	2	0	0	0	36	0	0
Drexel University	884	45	5	52	8	516	110	148
Duquesne University	341	5	0	3	2	271	21	39
East Stroudsburg Univ of Pennsylvania	97	3	0	1	0	87	0	6
Edinboro University of Pennsylvania	103	4	0	1	3	93	1	1
Gannon University	115	3	0	1	1	109	0	1
Indiana University of Pennsylvania	321	15	0	9	4	265	1	27
Kutztown University of Pennsylvania	128	3	0	6	3	110	4	2
Lehigh University	409	9	0	24	5	195	149	27
Mansfield University of Pennsylvania	8	0	0	0	0	8	0	0
Marywood University	187	3	1	1	2	173	7	0
Medical College of Pennsylvania, The	0	0	0	0	0	0	0	0
Millersville University of Pennsylvania	114	5	0	1	1	106	0	1
Pennsylvania State University	2,362	79	5	86	44	1,518	12	618
Philadelphia Col of Osteopathic Med	188	9	0	9	4	166	0	0
Philadelphia Coll of Pharmacy and Sci	29	0	0	4	0	14	1	10
Shippensburg University of Pennsylvania	326	15	2	1	6	289	0	13
Slippery Rock University of Pennsylvania	189	6	0	5	0	175	3	0
St Joseph's University	231	15	0	91	3	119	1	2
Swarthmore College	0	0	0	0	0	0	0	0
Temple University	845	61	2	139	28	481	7	127
Thomas Jefferson University	260	19	3	18	21	177	4	18
University of Pennsylvania	1,585	49	0	91	28	843	22	552
University of Pittsburgh	1,885	99	1	86	48	1,048	132	471
University of Scranton	96	0	0	2	2	71	5	16
Villanova University	398	2	1	25	4	225	36	105
West Chester University of Pennsylvania	220	4	0	2	1	192	0	21
Widener University	0	0	0	0	0	0	0	0
Wilkes University	1	0	0	0	0	1	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
East North Central	49,107	2,767	160	2,679	1,112	29,104	1,089	12,196
Illinois	17,377	1,389	44	1,359	495	9,653	557	3,880
Bradley University	107	0	0	14	0	10	20	63
Chicago School of Prof Psych	199	17	0	7	9	155	0	11
Chicago State University	308	264	1	2	7	26	0	8
DePaul University	1,942	207	1	340	90	1,132	59	113
Eastern Illinois University	131	0	0	6	0	5	105	15
Finch U of Hlth Sci/The Chicago Med Sch	253	6	0	58	14	158	0	17
Governors State University	418	119	1	16	20	237	15	10
Illinois Institute of Technology	1,249	121	0	213	34	541	17	323
Illinois State University	547	28	0	18	4	423	1	73
Loyola University of Chicago	793	32	2	61	26	494	10	168
Midwestern University	0	0	0	0	0	0	0	0
Northeastern Illinois University	348	11	0	63	34	220	2	18
Northern Illinois University	849	22	0	62	10	475	114	166
Northwestern University	841	37	3	49	20	440	16	276
Roosevelt University	571	140	2	27	27	286	35	54
Rush University	85	2	0	7	1	56	0	19
Southern Illinois Univ at Carbondale	1,059	47	5	26	19	696	15	251
Southern Illinois Univ at Edwardsville	477	50	3	14	3	339	0	68
Univ of Illinois at Urbana-Champaign	2,851	59	18	142	56	1,428	88	1,060
University of Chicago	1,918	48	6	124	61	1,086	0	593
University of Illinois at Chicago	1,271	77	2	76	51	603	35	427
University of Illinois at Springfield	780	87	0	28	7	600	0	58
Western Illinois University	380	15	0	6	2	243	25	89
Indiana	6,020	155	26	202	135	3,534	104	1,864
Ball State University	439	0	0	2	0	306	0	131
Butler University	0	0	0	0	0	0	0	0
Indiana State University	312	23	1	2	10	190	8	78
Indiana University	2,719	71	8	115	60	1,807	67	591
Indiana Wesleyan University	0	0	0	0	0	0	0	0
Purdue University	1,914	53	10	70	50	890	17	824
Rose-Hulman Institute of Technology	7	0	0	0	0	2	0	5
University of Evansville	0	0	0	0	0	0	0	0
University of Indianapolis	0	0	0	0	0	0	0	0
University of Notre Dame	558	8	3	12	15	284	4	232
University of Saint Francis	30	0	0	1	0	19	8	2
Valparaiso University	41	0	4	0	0	36	0	1
Michigan	9,091	641	31	389	195	5,141	150	2,544
Andrews University	98	8	1	1	5	42	0	41
Central Michigan University	462	14	1	15	2	321	13	96
Eastern Michigan University	624	18	1	50	5	281	29	240
Grand Valley State University	194	7	1	14	2	154	2	14
Michigan State University	2,332	113	8	65	56	1,266	20	804
Michigan Technological University	218	3	0	2	0	115	4	94
Northern Michigan University	97	1	2	2	0	92	0	0
Oakland University	199	14	1	7	2	142	2	31
University of Detroit Mercy	263	40	0	9	3	149	8	54
University of Michigan	2,275	181	11	138	92	1,315	18	520
Wayne State University	1,241	152	3	69	14	568	54	381
Western Michigan University	1,088	90	2	17	14	696	0	269
Ohio	11,340	492	31	572	155	7,233	167	2,690
Air Force Institute of Technology	219	0	0	5	0	94	0	120
Antioch University	1,083	34	6	27	21	972	17	6
Bowling Green State University	492	26	3	9	4	296	2	152
Case Western Reserve University	806	21	0	78	14	460	14	219
Cleveland State University	468	47	0	16	10	314	18	63
John Carroll University	83	1	0	2	0	78	0	2
Kent State University	786	32	2	13	6	485	22	226

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Ohio, continued:								
Medical College of Ohio	94	0	0	42	1	47	4	0
Miami University (OH)	473	15	2	45	6	324	5	76
Ohio State University	2,632	92	3	214	38	1,402	26	857
Ohio University	617	9	0	9	5	343	0	251
Union Institute	410	51	8	7	3	305	35	1
University of Akron	953	16	0	22	9	683	9	214
University of Cincinnati	877	39	1	24	9	547	2	255
University of Dayton	135	8	0	5	0	97	1	24
University of Toledo	409	32	1	33	3	249	6	85
Wright State University	560	46	5	18	22	333	5	131
Xavier University	117	9	0	1	3	103	1	0
Youngstown State University	126	14	0	2	1	101	0	8
Wisconsin	5,279	90	28	157	132	3,543	111	1,218
Marquette University	402	9	0	10	8	247	3	125
Medical College of Wisconsin	199	0	0	6	2	76	65	50
Milwaukee School of Engineering	0	0	0	0	0	0	0	0
University of Wisconsin-Eau Claire	13	0	0	0	0	13	0	0
University of Wisconsin-Green Bay	39	0	0	0	0	31	0	8
University of Wisconsin-La Crosse	56	0	0	3	0	51	0	2
University of Wisconsin-Madison	3,273	30	19	103	95	2,138	39	849
University of Wisconsin-Milwaukee	969	47	6	29	25	693	3	166
University of Wisconsin-Oshkosh	130	4	2	4	1	118	1	0
University of Wisconsin-Platteville	8	0	0	1	0	7	0	0
University of Wisconsin-River Falls	31	0	0	0	0	31	0	0
University of Wisconsin-Stevens Point	61	0	0	0	0	60	0	1
University of Wisconsin-Stout	81	0	1	1	1	63	0	15
University of Wisconsin-Whitewater	17	0	0	0	0	15	0	2
West North Central	20,872	705	112	647	400	12,467	1,821	4,720
Iowa	3,325	85	4	78	63	1,792	152	1,151
Drake University	210	23	0	7	14	156	6	4
Iowa State University	1,751	27	2	32	23	875	96	696
Loras College	14	0	0	0	0	14	0	0
Maharishi University of Management	78	0	0	0	0	14	35	29
Marycrest International Univ	37	0	0	0	1	21	0	15
Univ of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0
University of Iowa	1,117	28	2	37	24	615	14	397
University of Northern Iowa	118	7	0	2	1	97	1	10
Kansas	4,451	152	34	132	99	2,850	284	900
Emporia State University	224	2	2	3	3	174	20	20
Fort Hays State University	55	0	0	1	2	52	0	0
Kansas State University	1,360	36	4	74	19	810	13	404
Pittsburg State University	171	2	1	3	2	137	14	12
University of Kansas	2,066	80	25	37	57	1,333	236	298
Washburn University of Topeka	22	1	0	0	1	20	0	0
Wichita State University	553	31	2	14	15	324	1	166
Minnesota	5,360	201	30	161	83	2,763	1,190	932
Bemidji State University	18	0	0	4	0	12	0	2
Mayo Graduate School	137	2	1	9	10	83	5	27
Minnesota State University at Mankato	270	3	3	14	2	198	12	38
Moorhead State University	43	0	0	0	0	43	0	0
Saint Mary's University of Minnesota	1,047	0	0	0	0	0	1,047	0
St. Cloud State University	107	2	0	1	0	101	0	3
University of Minnesota	3,183	74	12	121	53	2,012	54	857
Walden University	555	120	14	12	18	314	72	5
Missouri	4,395	197	12	205	106	2,926	39	910
Central Missouri State University	226	14	0	7	3	200	2	0

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Missouri, continued:								
Forest Institute of Professional Psych	224	4	1	4	7	205	0	3
Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0
Lincoln University	19	7	0	0	1	10	1	0
Northwest Missouri State University	33	0	0	0	0	31	0	2
Saint Louis University	415	38	1	13	9	295	3	56
Southeast Missouri State University	44	2	0	1	0	38	0	3
Southwest Missouri State University	244	7	2	7	1	224	0	3
Truman State University	15	0	0	7	0	6	2	0
University of Missouri-Columbia	1,179	60	1	62	37	717	11	291
University of Missouri-Kansas City	465	14	3	24	13	260	10	141
University of Missouri-Rolla	225	4	1	6	1	108	1	104
University of Missouri-St. Louis	382	25	1	11	16	261	4	64
Washington University	924	22	2	63	18	571	5	243
Nebraska	1,900	56	5	35	31	1,223	27	523
Creighton University	98	0	0	6	4	58	2	28
University of Nebraska - Lincoln	1,198	27	4	14	20	717	5	411
University of Nebraska - Omaha	483	27	0	5	7	350	20	74
University of Nebraska Medical Center	78	2	1	10	0	55	0	10
University of Nebraska at Kearney	43	0	0	0	0	43	0	0
North Dakota	857	12	16	14	13	547	69	186
North Dakota State University	440	4	2	5	6	270	2	151
University of North Dakota	417	8	14	9	7	277	67	35
South Dakota	584	2	11	22	5	366	60	118
South Dakota School of Mines and Tech	77	0	0	0	0	0	57	20
South Dakota State University	304	2	5	14	2	215	2	64
University of South Dakota	203	0	6	8	3	151	1	34
South Atlantic	48,845	4,289	117	2,439	1,477	30,856	957	8,710
Delaware	1,054	66	3	35	17	622	13	298
Delaware State University	30	14	0	1	0	12	0	3
University of Delaware	1,024	52	3	34	17	610	13	295
District of Columbia	5,654	766	13	333	209	2,967	202	1,164
American University	1,857	253	5	85	96	995	53	370
Catholic University of America	359	15	1	19	13	238	7	66
Gallaudet University	0	0	0	0	0	0	0	0
George Washington University	2,266	108	4	142	80	1,408	119	405
Georgetown University	641	9	3	64	18	312	12	223
Howard University	528	378	0	23	2	14	11	100
University of the District of Columbia	3	3	0	0	0	0	0	0
Florida	9,959	680	20	386	755	6,394	268	1,456
Embry-Riddle Aeronautical University	79	5	0	6	4	37	2	25
Florida A&M University	144	108	0	4	1	13	18	0
Florida Atlantic University	593	45	1	30	42	386	0	89
Florida Institute of Technology	511	20	0	11	14	327	6	133
Florida International University	753	68	1	20	203	312	149	0
Florida State University	1,095	57	2	42	28	754	1	211
Jacksonville University	0	0	0	0	0	0	0	0
Nova Southeastern University	1,722	128	4	55	159	1,267	40	69
Stetson University	0	0	0	0	0	0	0	0
University of Central Florida	763	41	3	42	38	541	0	98
University of Florida	2,139	73	1	88	92	1,331	5	549
University of Miami	756	44	6	24	98	369	6	209
University of South Florida	1,037	58	0	47	69	762	28	73
University of West Florida	367	33	2	17	7	295	13	0

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Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Georgia	5,575	709	9	229	84	3,486	68	990
Atlanta University	0	0	0	0	0	0	0	0
Augusta State University	40	1	0	0	2	37	0	0
Clark Atlanta University	319	276	0	8	5	1	12	17
Emory University	707	37	1	34	13	492	7	123
Fort Valley State College	0	0	0	0	0	0	0	0
Georgia College and State University	213	46	1	8	4	143	1	10
Georgia Institute of Technology	906	60	1	28	10	563	0	244
Georgia Southern University	176	20	1	2	1	142	1	9
Georgia State University	1,004	134	1	89	29	609	10	132
Institute of Paper Science & Technology	0	0	0	0	0	0	0	0
Medical College of Georgia	98	4	0	4	0	55	1	34
Mercer University	24	0	0	0	0	0	24	0
Morehouse School of Medicine	16	13	0	0	0	2	0	1
State University of West Georgia	145	19	1	1	3	112	3	6
University of Georgia	1,696	49	2	54	15	1,154	9	413
Valdosta State University	231	50	1	1	2	176	0	1
Maryland	6,971	548	17	443	132	4,014	212	1,605
Coppin State College	35	34	0	0	0	1	0	0
Frostburg State University	85	0	0	0	2	81	0	2
Hood College	350	11	1	36	5	198	88	11
Johns Hopkins University	1,491	36	3	173	31	839	8	401
Loyola College	501	41	0	10	7	384	23	36
Morgan State University	47	34	0	1	1	1	0	10
Towson University	458	39	4	30	6	287	3	89
Uniformed Serv Univ of the Hlth Sciences	62	3	1	5	2	48	3	0
Univ of Maryland - Baltimore County	755	62	0	58	6	466	5	158
University of Baltimore	314	101	0	2	2	197	4	8
University of Maryland - College Park	2,375	144	8	96	61	1,266	43	757
University of Maryland Eastern Shore	123	22	0	0	3	35	1	62
University of Maryland at Baltimore	349	20	0	31	6	193	29	70
Washington College	26	1	0	1	0	18	5	1
North Carolina	7,675	785	29	363	100	5,310	82	1,006
Appalachian State University	211	5	0	1	4	195	0	6
Duke University	1,067	31	2	123	18	706	8	179
East Carolina University	405	20	3	12	4	332	28	6
North Carolina A&T State University	172	106	2	23	1	15	18	7
North Carolina Central University	394	327	4	13	4	45	1	0
North Carolina State University	2,015	80	7	53	27	1,457	0	391
Univ of North Carolina at Chapel Hill	2,095	124	8	84	32	1,514	13	320
Univ of North Carolina at Charlotte	461	43	1	29	2	315	0	71
Univ of North Carolina at Greensboro	339	37	1	4	5	276	2	14
University of North Carolina/Wilmington	165	1	1	10	0	153	0	0
Wake Forest University	236	7	0	11	3	192	12	11
Western Carolina University	115	4	0	0	0	110	0	1
South Carolina	2,452	124	3	43	30	1,641	34	577
Clemson University	929	21	1	8	4	589	21	285
College of Charleston	165	5	1	1	1	148	1	8
Furman University	8	0	0	1	1	6	0	0
Medical University of South Carolina	225	11	0	13	3	177	0	21
University of South Carolina	1,035	78	1	20	20	641	12	263
Winnthrop University	90	9	0	0	1	80	0	0
Virginia	8,058	586	19	587	130	5,338	60	1,338
College of William and Mary	361	13	1	11	9	284	0	43
Eastern Virginia Medical School	130	17	0	3	2	88	2	18
George Mason University	2,295	103	5	277	49	1,457	0	404
Hampton University	118	57	1	7	0	2	7	44

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Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Virginia, continued:								
Hollins University	7	0	0	0	1	0	6	0
Institute of Textile Technology	0	0	0	0	0	0	0	0
James Madison University	212	10	1	10	0	176	0	15
Lynchburg College	0	0	0	0	0	0	0	0
Old Dominion University	935	111	3	22	13	560	29	197
Radford University	177	12	1	8	2	139	0	15
University of Richmond	13	0	0	1	0	12	0	0
University of Virginia	1,060	40	2	66	14	780	3	155
Virginia Commonwealth University	998	81	3	89	8	726	6	85
Virginia Polytechnic Inst and State Univ	1,669	79	2	91	31	1,097	7	362
Virginia State University	83	63	0	2	1	17	0	0
West Virginia	1,447	25	4	20	20	1,084	18	276
Marshall University	579	8	2	4	14	506	18	27
University of Charleston	0	0	0	0	0	0	0	0
West Virginia Graduate College	0	0	0	0	0	0	0	0
West Virginia University	868	17	2	16	6	578	0	249
West Virginia University Institute of Te	0	0	0	0	0	0	0	0
East South Central	13,331	1,582	30	350	137	8,750	117	2,365
Alabama	3,688	488	10	138	54	2,239	19	740
Alabama A&M University	134	67	0	3	4	7	0	53
Alabama State University	20	17	0	0	0	3	0	0
Auburn University	1,059	113	2	16	15	678	8	227
Jacksonville State University	227	57	3	3	5	145	1	13
Troy State University in Montgomery	50	10	0	4	2	33	1	0
Tuskegee University	68	59	0	2	0	0	0	7
University of Alabama at Birmingham, The	853	81	2	50	13	501	6	200
University of Alabama in Huntsville, The	279	15	1	18	4	166	0	75
University of Alabama, The	734	53	0	38	8	517	2	116
University of Montevallo	0	0	0	0	0	0	0	0
University of South Alabama	264	16	2	4	3	189	1	49
Kentucky	2,747	114	7	31	30	1,988	66	511
Eastern Kentucky University	309	9	1	1	2	273	2	21
Morehead State University	100	8	0	1	0	88	0	3
Murray State University	190	6	1	0	0	154	0	29
Spalding University	137	6	1	1	3	121	0	5
University of Kentucky	1,241	51	1	13	11	776	57	332
University of Louisville	572	24	1	14	14	417	1	101
Western Kentucky University	198	10	2	1	0	159	6	20
Mississippi	2,520	494	4	59	17	1,457	28	461
Jackson State University	313	224	0	13	0	23	0	53
Mississippi State University	1,127	176	2	30	8	672	27	212
Mississippi University for Women	0	0	0	0	0	0	0	0
University of Mississippi	507	54	2	9	1	292	1	148
University of Southern Mississippi	573	40	0	7	8	470	0	48
Tennessee	4,376	486	9	122	36	3,066	4	653
Austin Peay State University	58	5	0	1	3	49	0	0
East Tennessee State University	268	1	0	8	1	225	0	33
Fisk University	38	34	0	1	0	1	0	2
Meharry Medical College	125	100	0	3	1	8	3	10
Middle Tennessee State University	287	12	1	20	4	250	0	0
Tennessee State University	327	155	0	8	4	144	0	16
Tennessee Technological University	155	0	0	0	2	141	0	12
University of Memphis	661	72	0	10	3	470	0	106
University of Tennessee at Chattanooga	198	26	0	3	3	156	0	10
University of Tennessee at Knoxville	1,351	44	6	28	10	1,040	0	223
University of Tennessee, Memphis	142	7	0	3	1	74	0	57

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Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Tennessee, continued:								
Vanderbilt University	766	30	2	37	4	508	1	184
West South Central	27,404	1,788	215	1,541	1,555	15,726	455	6,124
Arkansas	1,523	131	8	70	12	1,018	42	242
Arkansas State University	314	9	0	0	0	209	0	96
University of Arkansas - Med Sci Campus	145	11	1	8	0	91	0	34
University of Arkansas Main	661	53	5	50	9	429	41	74
University of Arkansas at Little Rock	211	41	0	8	3	120	1	38
University of Central Arkansas	192	17	2	4	0	169	0	0
Louisiana	4,118	621	9	97	77	2,284	83	947
Grambling State University	7	6	0	0	0	0	0	1
Louisiana State University	2,246	197	8	66	50	1,321	49	555
Louisiana Tech University	109	2	0	0	0	48	0	59
Loyola University New Orleans	0	0	0	0	0	0	0	0
McNeese State University	101	8	0	5	2	85	0	1
Nicholls State University	65	15	0	0	2	48	0	0
Northeast Louisiana University	157	26	0	2	0	108	0	21
Northwestern State University	34	2	0	0	1	29	2	0
Southeastern Louisiana University	78	2	0	0	1	74	1	0
Southern University A & M, All Campuses	436	331	0	0	0	71	24	10
Tulane University	565	27	0	20	19	358	7	134
University of Southwestern Louisiana	320	5	1	4	2	142	0	166
Xavier University of Louisiana	0	0	0	0	0	0	0	0
Oklahoma	2,628	68	96	113	47	1,545	55	704
East Central University	33	4	2	1	0	26	0	0
Northeastern State University	85	3	6	0	1	73	2	0
Oklahoma State University	1,171	30	41	50	21	613	0	416
Oral Roberts University	0	0	0	0	0	0	0	0
Southwestern Oklahoma State University	22	0	0	0	0	21	0	1
University of Oklahoma	1,125	27	41	58	18	695	44	242
University of Tulsa	192	4	6	4	7	117	9	45
Texas	19,135	968	102	1,261	1,419	10,879	275	4,231
Abilene Christian University	126	3	2	0	8	98	8	7
Angelo State University	120	5	2	1	16	93	0	3
Baylor College of Dentistry	10	0	0	0	1	4	0	5
Baylor College of Medicine	317	6	0	19	10	175	0	107
Baylor University	282	2	1	15	18	194	9	43
Lamar University	163	5	0	9	5	61	24	59
Midwestern State University	148	6	0	28	3	84	26	1
Prairie View A&M University	100	86	0	0	4	4	0	6
Rice University	514	19	3	29	18	284	5	156
Sam Houston State University	387	23	2	3	17	299	0	43
Southern Methodist University	331	3	2	17	5	203	5	96
Southwest Texas State University	643	21	5	16	88	431	0	82
St. Mary's University	193	13	1	5	59	90	6	19
Stephen F. Austin State University	254	11	4	3	6	212	0	18
Sul Ross State University	78	0	0	2	21	53	0	2
Tarleton State University	57	1	0	0	2	53	0	1
Texas A&M University	3,066	54	4	122	146	1,808	43	889
Texas A&M University-Commerce	310	15	24	4	3	160	0	104
Texas A&M University-Corpus Christi	335	7	1	14	79	205	0	29
Texas A&M University-Kingsville	240	5	1	3	100	93	10	28
Texas Christian University	122	1	0	4	5	82	2	28
Texas Southern University	284	256	0	2	4	2	1	19
Texas Tech University	891	4	0	22	33	580	13	239
Texas Woman's University	521	29	4	33	42	390	23	0
Trinity University	0	0	0	0	0	0	0	0
U of North TX Hlth Sci Ctr at Ft Worth	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Texas, continued:								
Univ of Texas Hlth Sci Ctr San Antonio	190	5	0	10	17	101	2	55
Univ of Texas Hlth Sci Ctr at Houston	566	16	3	55	32	303	2	155
Univ of Texas M.D. Anderson Cancer Ctr	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston	148	2	1	9	7	70	1	58
Univ of Texas SW Medical Ctr at Dallas	328	4	0	27	14	197	2	84
University of Central Texas	226	67	4	2	12	130	4	7
University of Houston	1,200	34	6	361	49	463	10	277
University of Houston - Victoria	32	1	0	0	5	26	0	0
University of Houston Clear Lake	1,018	114	5	94	75	559	0	171
University of Incarnate Word	80	7	0	1	23	39	5	5
University of North Texas	1,274	44	11	149	42	817	50	161
University of Texas at Arlington	865	27	3	51	28	417	0	339
University of Texas at Austin	2,090	28	4	64	100	1,232	17	645
University of Texas at Dallas	414	20	2	25	11	244	0	112
University of Texas at El Paso	372	9	2	14	123	111	0	113
University of Texas at San Antonio	335	7	1	46	87	157	2	35
University of Texas at Tyler	133	1	0	0	3	121	5	3
University of Texas of the Permian Basin	63	0	0	0	6	56	0	1
University of Texas-Pan American	124	3	1	2	82	30	0	6
West Texas A&M University	185	4	3	0	10	148	0	20
Mountain	19,794	254	209	734	819	13,654	981	3,143
Arizona	4,684	85	71	179	233	3,078	85	953
Arizona State University	1,963	43	19	66	89	1,221	57	468
Northern Arizona University	538	16	26	10	31	430	1	24
University of Arizona	2,183	26	26	103	113	1,427	27	461
Colorado	5,993	108	51	255	228	4,317	160	874
Colorado School of Mines	462	5	2	10	9	283	10	143
Colorado State University	1,393	12	11	32	41	1,065	4	228
National Technological University	118	3	0	16	4	82	5	8
University of Colorado	3,086	73	26	153	134	2,205	139	356
University of Denver	742	14	10	39	32	514	2	131
University of Northern Colorado	192	1	2	5	8	168	0	8
Western State College	0	0	0	0	0	0	0	0
Idaho	1,157	4	13	26	20	921	21	152
Idaho State University	231	1	3	1	8	210	0	8
University of Idaho	926	3	10	25	12	711	21	144
Montana	1,046	3	17	28	7	894	16	81
Montana State University-Bozeman	441	2	3	18	1	363	11	43
Montana Tech of the Univ of Montana	22	0	1	0	0	21	0	0
University of Montana	583	1	13	10	6	510	5	38
Nevada	1,117	9	9	38	35	825	53	148
University of Nevada at Las Vegas	312	5	0	8	6	258	3	32
University of Nevada, Reno	805	4	9	30	29	567	50	116
New Mexico	2,376	33	29	34	254	1,153	484	389
Eastern New Mexico University	94	2	2	1	9	74	0	6
New Mexico Highlands University	49	1	1	2	11	19	5	10
New Mexico Institute of Mining and Tech	169	0	0	0	7	119	0	43
New Mexico State University	784	11	7	7	105	39	435	180
University of New Mexico	1,280	19	19	24	122	902	44	150
Utah	2,751	8	14	149	35	1,973	91	481
Brigham Young University	885	2	2	35	13	665	6	162
University of Utah	1,090	3	4	102	11	737	81	152

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Utah, continued:								
Utah State University	776	3	8	12	11	571	4	167
Wyoming	670	4	5	25	7	493	71	65
University of Wyoming	670	4	5	25	7	493	71	65
Pacific	48,561	1,838	349	5,324	2,882	26,611	3,301	8,256
Alaska	581	5	19	10	5	462	10	70
University of Alaska Anchorage	99	2	3	2	2	89	1	0
University of Alaska Fairbanks	433	3	16	8	3	324	9	70
University of Alaska Southeast	49	0	0	0	0	49	0	0
California	39,353	1,709	250	4,618	2,694	20,732	2,884	6,466
Azusa Pacific University	392	26	0	80	49	177	14	46
Biola University	48	0	0	6	2	33	0	7
Cal Schl of Prof Psych Berkeley/Alameda	262	17	3	32	17	163	21	9
Calif Poly State Univ, San Luis Obispo	249	3	0	0	1	202	1	42
Calif Sch of Prof Psych - Fresno	308	15	4	17	15	214	29	14
Calif Sch of Prof Psych - Los Angeles	686	64	10	72	67	397	67	9
Calif Sch of Prof Psych - San Diego	620	16	10	29	31	481	41	12
Calif State Univ at Dominguez Hills	393	162	1	25	69	96	30	10
Calif State Univ at Fullerton	784	18	2	109	86	353	76	140
Calif State Univ at Los Angeles	596	66	0	106	181	143	55	45
Calif State University at Sacramento	1,241	54	1	120	57	742	128	139
Calif State University, Stanislaus	107	5	0	4	13	63	22	0
California Institute of Integral Studies	360	5	1	4	7	320	11	12
California Institute of Technology	598	9	3	39	19	348	0	180
California State Poly University, Pomona	355	18	2	70	44	127	44	50
California State Univ - Bakersfield	55	1	2	2	8	37	5	0
California State Univ, San Bernadino	304	26	3	8	44	151	34	38
California State University, Chico	334	6	6	19	23	195	48	37
California State University, Fresno	550	20	5	60	112	202	63	88
California State University, Hayward	857	122	7	254	57	290	127	0
California State University, Long Beach	1,002	43	4	217	82	395	107	154
California State University, Northridge	564	19	3	71	58	263	86	64
Chapman University	368	15	1	11	22	280	33	6
Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
Claremont Graduate School	655	36	3	64	54	287	55	156
Dominican College of San Rafael	129	2	0	3	7	83	9	25
Fielding Institute, The	937	66	9	23	36	770	11	22
Fuller Theological Seminary	369	16	1	71	17	240	6	18
Golden Gate University	389	23	0	68	15	156	14	113
Harvey Mudd College	0	0	0	0	0	0	0	0
Humboldt State University	283	3	8	6	20	209	35	2
John F Kennedy University	611	36	9	34	27	472	33	0
Loma Linda University	570	33	2	69	69	281	1	115
Loyola Marymount University	82	2	0	16	3	49	6	6
Monterey Inst of Intl Studies	0	0	0	0	0	0	0	0
National University	899	93	3	50	99	617	14	23
Northrop University	0	0	0	0	0	0	0	0
Occidental College	3	0	0	0	0	3	0	0
Pacific Graduate School of Psychology	285	9	3	25	24	208	0	16
Pacific States University	9	0	0	0	0	0	0	9
Pepperdine University	713	54	8	57	61	361	152	20
RAND Graduate School of Policy Studies	54	1	0	1	3	38	0	11
San Diego State University	1,041	44	18	128	95	526	130	100
San Francisco State University	795	36	11	122	73	358	108	87
San Jose State University	795	32	1	196	54	309	97	106
Santa Clara University	418	4	1	88	6	101	39	179
Sonoma State University	65	4	2	1	5	46	7	0
Stanford University	2,064	48	14	270	61	950	55	666
US International University	300	15	3	16	12	231	20	3

See explanatory information, if any, and SOURCE at end of table.

Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
California, continued:								
US Naval Postgraduate School	494	3	0	21	0	238	1	231
University of Calif at Berkeley	2,939	70	16	307	132	1,760	142	512
University of Calif at Davis	1,920	26	9	190	76	1,095	176	348
University of Calif at Riverside	739	4	0	55	47	397	68	168
University of Calif at San Diego	1,446	23	7	144	77	826	121	248
University of Calif at San Francisco	327	4	0	55	20	210	8	30
University of Calif at Santa Barbara	1,129	11	3	80	65	689	103	178
University of Calif at Santa Cruz	655	17	4	57	46	365	74	92
University of California, Irvine	1,008	5	5	164	57	494	92	191
University of California, Los Angeles	2,862	96	22	486	164	1,294	178	622
University of La Verne	188	31	2	29	20	89	14	3
University of Redlands	0	0	0	0	0	0	0	0
University of San Diego	73	0	2	2	5	56	6	2
University of San Francisco	131	4	5	18	5	39	21	39
University of Southern California	2,601	99	9	324	151	969	45	1,004
University of the Pacific	49	1	0	3	3	27	1	14
West Coast University	0	0	0	0	0	0	0	0
Wright Institute, The	293	28	2	20	21	217	0	5
Hawaii	1,375	7	2	263	15	566	84	438
University of Hawaii at Manoa	1,375	7	2	263	15	566	84	438
Oregon	2,811	29	27	138	50	1,885	107	575
Oregon Grad Inst of Science & Technology	162	0	0	2	2	67	3	88
Oregon Health Sciences University	136	1	0	15	2	92	8	18
Oregon State University	1,009	6	7	73	18	648	27	230
Pacific University	0	0	0	0	0	0	0	0
Portland State University	782	14	10	28	12	572	41	105
Southern Oregon State College	40	0	0	2	0	35	3	0
University of Oregon	682	8	10	18	16	471	25	134
University of Portland	0	0	0	0	0	0	0	0
Washington	4,441	88	51	295	118	2,966	216	707
Central Washington University	104	1	6	2	3	85	3	4
Eastern Washington University	199	4	7	10	9	151	5	13
Gonzaga University	0	0	0	0	0	0	0	0
Pacific Lutheran University	67	5	2	1	2	37	18	2
Saint Martin's College	0	0	0	0	0	0	0	0
Seattle University	129	9	1	9	5	83	17	5
University of Washington	2,806	52	22	233	69	1,812	133	485
Walla Walla College	12	0	0	0	0	12	0	0
Washington State University	932	13	10	32	28	639	17	193
Western Washington University	192	4	3	8	2	147	23	5
Whitworth College	0	0	0	0	0	0	0	0
Outlying Areas	2,274	3	8	65	1,873	180	4	141
Guam	77	0	8	53	0	11	2	3
University of Guam	77	0	8	53	0	11	2	3
Puerto Rico	2,197	3	0	12	1,873	169	2	138
Caribbean Center for Advanced Studies	502	0	0	0	502	0	0	0
Ponce School of Medicine	17	0	0	0	17	0	0	0
The Pontifical Cath Univ of Puerto Rico	10	0	0	0	10	0	0	0
Univ of Puerto Rico Mayaguez Campus	445	0	0	1	354	16	0	74
Univ of Puerto Rico Rio Piedras Campus	1,113	3	0	6	890	153	2	59
University of Puerto Rico Med Sci Campus	110	0	0	5	100	0	0	5

NOTE: Includes medical schools

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
New England	7,984	128	5	477	133	3,873	671	2,697
Connecticut	1,014	25	0	35	13	520	98	323
Central Connecticut State University	0	0	0	0	0	0	0	0
Connecticut College	0	0	0	0	0	0	0	0
Quinnipiac College	0	0	0	0	0	0	0	0
Rensselaer at Hartford	318	15	0	14	4	202	66	17
Southern Connecticut State University	0	0	0	0	0	0	0	0
St. Joseph College	0	0	0	0	0	0	0	0
Trinity College	0	0	0	0	0	0	0	0
University of Bridgeport	61	0	0	0	0	8	5	48
University of Connecticut	419	9	0	13	8	204	11	174
University of Hartford	31	1	0	3	0	18	9	0
University of New Haven	99	0	0	1	0	70	0	28
Wesleyan University	0	0	0	0	0	0	0	0
Western Connecticut State University	0	0	0	0	0	0	0	0
Yale University	86	0	0	4	1	18	7	56
Maine	136	2	0	1	0	76	13	44
University of Maine	136	2	0	1	0	76	13	44
University of New England	0	0	0	0	0	0	0	0
Massachusetts	6,221	97	5	393	117	2,905	551	2,153
American International College	0	0	0	0	0	0	0	0
Anna Maria College	0	0	0	0	0	0	0	0
Assumption College	0	0	0	0	0	0	0	0
Boston College	0	0	0	0	0	0	0	0
Boston University	368	4	0	18	0	80	102	164
Brandeis University	0	0	0	0	0	0	0	0
Bridgewater State College	0	0	0	0	0	0	0	0
Clark University	0	0	0	0	0	0	0	0
Emerson College	0	0	0	0	0	0	0	0
Framingham State College	0	0	0	0	0	0	0	0
Harvard University	164	3	0	19	1	60	16	65
MGH Institute of Health Professions	0	0	0	0	0	0	0	0
Mass College of Pharmacy/Allied Health	0	0	0	0	0	0	0	0
Massachusetts Institute of Technology	2,333	49	1	229	59	1,125	6	864
Mount Holyoke College	0	0	0	0	0	0	0	0
Northeastern University	1,006	14	1	30	11	283	285	382
Salem State College	0	0	0	0	0	0	0	0
Smith College	0	0	0	0	0	0	0	0
Tufts University	381	11	1	24	11	219	21	94
University of Massachusetts	454	2	1	3	15	151	32	250
University of Massachusetts Dartmouth	93	1	0	1	0	40	2	49
University of Massachusetts Lowell	782	9	1	41	1	476	80	174
Western New England College	58	0	0	2	2	53	0	1
Williams College	0	0	0	0	0	0	0	0
Woods Hole Oceanographic Institution	29	0	0	1	2	18	0	8
Worcester Polytechnic Institute	553	4	0	25	15	400	7	102
Worcester State College	0	0	0	0	0	0	0	0
New Hampshire	220	0	0	9	2	139	9	61
Dartmouth College	56	0	0	3	1	29	0	23
Rivier College	0	0	0	0	0	0	0	0
University of New Hampshire	164	0	0	6	1	110	9	38
Rhode Island	302	3	0	38	1	162	0	98
Brown University	82	3	0	1	1	29	0	48
Rhode Island College	0	0	0	0	0	0	0	0
University of Rhode Island	220	0	0	37	0	133	0	50

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Vermont	91	1	0	1	0	71	0	18
Goddard College	0	0	0	0	0	0	0	0
Marlboro College	0	0	0	0	0	0	0	0
Middlebury College	0	0	0	0	0	0	0	0
University of Vermont	91	1	0	1	0	71	0	18
Middle Atlantic	14,034	428	13	1,177	338	5,717	1,070	5,291
New Jersey	2,650	76	3	270	95	1,042	197	967
College of New Jersey, The	0	0	0	0	0	0	0	0
Drew University	0	0	0	0	0	0	0	0
Fairleigh Dickinson University	23	1	0	1	0	4	1	16
Kean University	0	0	0	0	0	0	0	0
Monmouth University	132	3	0	24	4	60	28	13
Montclair State University	0	0	0	0	0	0	0	0
New Jersey Institute of Technology	914	34	2	80	65	248	127	358
Princeton University	385	4	1	27	6	138	5	204
Rutgers the State Univ of New Jersey	538	13	0	67	9	240	20	189
Seton Hall University	0	0	0	0	0	0	0	0
Stevens Institute of Technology	658	21	0	71	11	352	16	187
Univ of Med and Dentistry of New Jersey	0	0	0	0	0	0	0	0
William Paterson U of NJ	0	0	0	0	0	0	0	0
New York	6,600	235	7	624	168	2,469	605	2,492
Adelphi University	0	0	0	0	0	0	0	0
Albany Medical College	0	0	0	0	0	0	0	0
Alfred University	66	0	0	1	0	38	0	27
CUNY Bernard Baruch College	0	0	0	0	0	0	0	0
CUNY Brooklyn College	0	0	0	0	0	0	0	0
CUNY City College	180	35	0	36	20	33	8	48
CUNY College of Staten Island	0	0	0	0	0	0	0	0
CUNY Graduate School and Univ Center	117	13	0	5	4	17	0	78
CUNY Herbert H. Lehman College	0	0	0	0	0	0	0	0
CUNY Hunter College	0	0	0	0	0	0	0	0
CUNY John Jay College of Crim Justice	0	0	0	0	0	0	0	0
CUNY Mt. Sinai School of Medicine	0	0	0	0	0	0	0	0
CUNY Queens College	0	0	0	0	0	0	0	0
Clarkson University	127	1	4	0	0	37	0	85
College of New Rochelle	0	0	0	0	0	0	0	0
College of St Rose	0	0	0	0	0	0	0	0
Columbia Univ in the City of New York	623	5	0	87	8	163	31	329
Cooper Union	32	2	0	9	0	16	0	5
Cornell University	751	11	1	68	26	270	0	375
Fordham University	0	0	0	0	0	0	0	0
Hofstra University	0	0	0	0	0	0	0	0
Iona College	0	0	0	0	0	0	0	0
Ithaca College	0	0	0	0	0	0	0	0
Long Island University	0	0	0	0	0	0	0	0
Manhattan College	140	4	0	8	12	98	18	0
Marist College	0	0	0	0	0	0	0	0
New School University	0	0	0	0	0	0	0	0
New York Institute of Technology	298	60	0	44	20	174	0	0
New York Medical College	0	0	0	0	0	0	0	0
New York University	0	0	0	0	0	0	0	0
Niagara University	0	0	0	0	0	0	0	0
Pace University	0	0	0	0	0	0	0	0
Polytechnic University	722	25	0	57	20	100	348	172
Pratt Institute	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute	1,132	9	0	40	24	551	59	449
Rochester Institute of Technology	199	8	1	16	7	116	18	33
Russell Sage College	0	0	0	0	0	0	0	0
SUNY Health Science Center at Syracuse	0	0	0	0	0	0	0	0
SUNY College at Brockport	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
New York, continued:								
SUNY College at Buffalo	0	0	0	0	0	0	0	0
SUNY College at Cortland	0	0	0	0	0	0	0	0
SUNY College at Fredonia	0	0	0	0	0	0	0	0
SUNY College at Geneseo	0	0	0	0	0	0	0	0
SUNY College at Oneonta	0	0	0	0	0	0	0	0
SUNY College at Oswego	0	0	0	0	0	0	0	0
SUNY College at Plattsburgh	0	0	0	0	0	0	0	0
SUNY College at Potsdam	0	0	0	0	0	0	0	0
SUNY College of Env Science and Forestry	99	0	1	2	0	59	0	37
SUNY College of Optometry	0	0	0	0	0	0	0	0
SUNY Health Science Center at Brooklyn	0	0	0	0	0	0	0	0
SUNY Inst of Technology at Utica-Rome	0	0	0	0	0	0	0	0
SUNY at Albany	0	0	0	0	0	0	0	0
SUNY at Binghamton	237	12	0	17	4	108	1	95
SUNY at Buffalo	767	21	0	120	10	341	69	206
SUNY at New Paltz	6	0	0	2	1	1	0	2
SUNY at Stony Brook	305	14	0	23	5	108	2	153
Saint John's University	0	0	0	0	0	0	0	0
Sarah Lawrence College	0	0	0	0	0	0	0	0
St. Bonaventure University	0	0	0	0	0	0	0	0
Syracuse University	591	10	0	80	6	142	44	309
Teachers College, Columbia University	0	0	0	0	0	0	0	0
The Rockefeller University	0	0	0	0	0	0	0	0
Union College	28	0	0	2	1	22	0	3
University of Rochester	180	5	0	7	0	75	7	86
Vassar College	0	0	0	0	0	0	0	0
Wagner College	0	0	0	0	0	0	0	0
Yeshiva University	0	0	0	0	0	0	0	0
Pennsylvania	4,784	117	3	283	75	2,206	268	1,832
Allegheny University of Health Sciences	0	0	0	0	0	0	0	0
Bloomsburg University of Pennsylvania	0	0	0	0	0	0	0	0
Bryn Mawr College	0	0	0	0	0	0	0	0
Bucknell University	25	0	0	0	0	14	1	10
California University of Pennsylvania	0	0	0	0	0	0	0	0
Carnegie Mellon University	616	11	0	32	7	227	11	328
Clarion University of Pennsylvania	0	0	0	0	0	0	0	0
Drexel University	673	24	1	33	9	288	96	222
Duquesne University	0	0	0	0	0	0	0	0
East Stroudsburg Univ of Pennsylvania	0	0	0	0	0	0	0	0
Edinboro University of Pennsylvania	0	0	0	0	0	0	0	0
Gannon University	52	0	0	1	0	38	2	11
Indiana University of Pennsylvania	0	0	0	0	0	0	0	0
Kutztown University of Pennsylvania	0	0	0	0	0	0	0	0
Lehigh University	578	13	0	25	9	287	12	232
Mansfield University of Pennsylvania	0	0	0	0	0	0	0	0
Marywood University	0	0	0	0	0	0	0	0
Medical College of Pennsylvania, The	0	0	0	0	0	0	0	0
Millersville University of Pennsylvania	0	0	0	0	0	0	0	0
Pennsylvania State University	1,475	31	1	79	25	655	79	605
Philadelphia Col of Osteopathic Med	0	0	0	0	0	0	0	0
Philadelphia Coll of Pharmacy and Sci	0	0	0	0	0	0	0	0
Shippensburg University of Pennsylvania	0	0	0	0	0	0	0	0
Slippery Rock University of Pennsylvania	0	0	0	0	0	0	0	0
St Joseph's University	0	0	0	0	0	0	0	0
Swarthmore College	0	0	0	0	0	0	0	0
Temple University	65	4	0	24	4	27	0	6
Thomas Jefferson University	0	0	0	0	0	0	0	0
University of Pennsylvania	348	7	0	51	10	150	10	120
University of Pittsburgh	647	20	1	24	8	362	0	232
University of Scranton	0	0	0	0	0	0	0	0
Villanova University	209	2	0	4	2	107	57	37

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Pennsylvania, continued:								
West Chester University of Pennsylvania	0	0	0	0	0	0	0	0
Widener University	88	5	0	10	1	47	0	25
Wilkes University	8	0	0	0	0	4	0	4
East North Central	18,660	413	31	1,025	306	8,322	410	8,153
Illinois	4,470	115	4	404	106	1,712	78	2,051
Bradley University	216	1	0	18	0	84	25	88
Chicago School of Prof Psych	0	0	0	0	0	0	0	0
Chicago State University	0	0	0	0	0	0	0	0
DePaul University	0	0	0	0	0	0	0	0
Eastern Illinois University	0	0	0	0	0	0	0	0
Finch U of Hlth Sci/The Chicago Med Sch	0	0	0	0	0	0	0	0
Governors State University	0	0	0	0	0	0	0	0
Illinois Institute of Technology	734	31	1	81	30	290	7	294
Illinois State University	0	0	0	0	0	0	0	0
Loyola University of Chicago	0	0	0	0	0	0	0	0
Midwestern University	0	0	0	0	0	0	0	0
Northeastern Illinois University	0	0	0	0	0	0	0	0
Northern Illinois University	144	1	0	6	2	64	0	71
Northwestern University	638	22	1	54	11	284	7	259
Roosevelt University	29	7	0	3	0	12	2	5
Rush University	0	0	0	0	0	0	0	0
Southern Illinois Univ at Carbondale	187	12	0	6	1	52	3	113
Southern Illinois Univ at Edwardsville	135	5	0	4	1	58	0	67
Univ of Illinois at Urbana-Champaign	1,450	14	1	119	46	615	14	641
University of Chicago	0	0	0	0	0	0	0	0
University of Illinois at Chicago	937	22	1	113	15	253	20	513
University of Illinois at Springfield	0	0	0	0	0	0	0	0
Western Illinois University	0	0	0	0	0	0	0	0
Indiana	1,987	36	4	99	40	759	9	1,040
Ball State University	14	0	0	0	0	11	0	3
Butler University	0	0	0	0	0	0	0	0
Indiana State University	0	0	0	0	0	0	0	0
Indiana University	82	9	0	26	0	46	0	1
Indiana Wesleyan University	0	0	0	0	0	0	0	0
Purdue University	1,497	20	2	67	37	532	9	830
Rose-Hulman Institute of Technology	126	1	0	0	0	77	0	48
University of Evansville	0	0	0	0	0	0	0	0
University of Indianapolis	0	0	0	0	0	0	0	0
University of Notre Dame	268	6	2	6	3	93	0	158
University of Saint Francis	0	0	0	0	0	0	0	0
Valparaiso University	0	0	0	0	0	0	0	0
Michigan	5,148	137	9	320	69	2,684	152	1,777
Andrews University	0	0	0	0	0	0	0	0
Central Michigan University	0	0	0	0	0	0	0	0
Eastern Michigan University	0	0	0	0	0	0	0	0
Grand Valley State University	6	0	0	0	1	5	0	0
Michigan State University	494	17	0	27	11	156	10	273
Michigan Technological University	328	6	0	3	0	167	4	148
Northern Michigan University	0	0	0	0	0	0	0	0
Oakland University	642	15	0	33	4	434	18	138
University of Detroit Mercy	178	12	1	6	3	100	9	47
University of Michigan	2,270	47	5	160	43	1,268	67	680
Wayne State University	818	34	2	79	6	372	44	281
Western Michigan University	412	6	1	12	1	182	0	210
Ohio	4,980	98	8	123	52	1,967	155	2,577
Air Force Institute of Technology	207	0	0	1	2	101	12	91

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Ohio, continued:								
Antioch University	0	0	0	0	0	0	0	0
Bowling Green State University	0	0	0	0	0	0	0	0
Case Western Reserve University	543	6	1	22	1	222	19	272
Cleveland State University	202	22	2	4	7	101	31	35
John Carroll University	0	0	0	0	0	0	0	0
Kent State University	0	0	0	0	0	0	0	0
Medical College of Ohio	0	0	0	0	0	0	0	0
Miami University (OH)	10	0	0	7	1	2	0	0
Ohio State University	1,186	10	0	18	20	460	3	675
Ohio University	279	1	0	3	0	36	21	218
Union Institute	0	0	0	0	0	0	0	0
University of Akron	278	0	0	2	0	174	0	102
University of Cincinnati	1,053	22	2	27	8	341	15	638
University of Dayton	347	22	0	20	10	204	46	45
University of Toledo	506	6	2	5	1	123	3	366
Wright State University	307	7	1	14	2	162	5	116
Xavier University	0	0	0	0	0	0	0	0
Youngstown State University	62	2	0	0	0	41	0	19
Wisconsin	2,075	27	6	79	39	1,200	16	708
Marquette University	305	2	1	23	3	192	0	84
Medical College of Wisconsin	0	0	0	0	0	0	0	0
Milwaukee School of Engineering	413	6	2	9	5	378	0	13
University of Wisconsin-Eau Claire	0	0	0	0	0	0	0	0
University of Wisconsin-Green Bay	28	1	3	0	0	24	0	0
University of Wisconsin-La Crosse	0	0	0	0	0	0	0	0
University of Wisconsin-Madison	977	12	0	34	23	386	15	507
University of Wisconsin-Milwaukee	317	6	0	13	8	190	1	99
University of Wisconsin-Oshkosh	0	0	0	0	0	0	0	0
University of Wisconsin-Platteville	11	0	0	0	0	10	0	1
University of Wisconsin-River Falls	0	0	0	0	0	0	0	0
University of Wisconsin-Stevens Point	0	0	0	0	0	0	0	0
University of Wisconsin-Stout	24	0	0	0	0	20	0	4
University of Wisconsin-Whitewater	0	0	0	0	0	0	0	0
West North Central	5,432	61	8	228	45	2,359	173	2,558
Iowa	1,047	17	1	32	11	365	22	599
Drake University	0	0	0	0	0	0	0	0
Iowa State University	727	12	1	9	8	232	22	443
Loras College	0	0	0	0	0	0	0	0
Maharishi University of Management	0	0	0	0	0	0	0	0
Marycrest International Univ	0	0	0	0	0	0	0	0
Univ of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0
University of Iowa	320	5	0	23	3	133	0	156
University of Northern Iowa	0	0	0	0	0	0	0	0
Kansas	1,194	10	4	31	11	503	30	605
Emporia State University	0	0	0	0	0	0	0	0
Fort Hays State University	0	0	0	0	0	0	0	0
Kansas State University	309	1	0	2	1	129	0	176
Pittsburg State University	0	0	0	0	0	0	0	0
University of Kansas	452	5	3	14	6	236	30	158
Washburn University of Topeka	0	0	0	0	0	0	0	0
Wichita State University	433	4	1	15	4	138	0	271
Minnesota	1,202	9	1	61	8	579	36	508
Bemidji State University	0	0	0	0	0	0	0	0
Mayo Graduate School	5	0	0	1	0	3	0	1
Minnesota State University at Mankato	11	0	0	1	0	4	0	6

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Minnesota, continued:								
Moorhead State University	0	0	0	0	0	0	0	0
Saint Mary's University of Minnesota	0	0	0	0	0	0	0	0
St. Cloud State University	0	0	0	0	0	0	0	0
University of Minnesota	1,186	9	1	59	8	572	36	501
Walden University	0	0	0	0	0	0	0	0
Missouri	1,273	21	0	62	11	565	47	567
Central Missouri State University	31	1	0	10	0	17	1	2
Forest Institute of Professional Psych	0	0	0	0	0	0	0	0
Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0
Lincoln University	0	0	0	0	0	0	0	0
Northwest Missouri State University	0	0	0	0	0	0	0	0
Saint Louis University	15	0	0	0	1	1	4	9
Southeast Missouri State University	0	0	0	0	0	0	0	0
Southwest Missouri State University	11	0	0	0	0	5	0	6
Truman State University	0	0	0	0	0	0	0	0
University of Missouri-Columbia	285	4	0	7	2	82	0	190
University of Missouri-Kansas City	0	0	0	0	0	0	0	0
University of Missouri-Rolla	623	13	0	18	7	301	34	250
University of Missouri-St. Louis	0	0	0	0	0	0	0	0
Washington University	308	3	0	27	1	159	8	110
Nebraska	352	2	1	28	4	177	0	140
Creighton University	0	0	0	0	0	0	0	0
University of Nebraska - Lincoln	352	2	1	28	4	177	0	140
University of Nebraska - Omaha	0	0	0	0	0	0	0	0
University of Nebraska Medical Center	0	0	0	0	0	0	0	0
University of Nebraska at Kearney	0	0	0	0	0	0	0	0
North Dakota	119	2	0	9	0	74	6	28
North Dakota State University	85	1	0	4	0	50	6	24
University of North Dakota	34	1	0	5	0	24	0	4
South Dakota	245	0	1	5	0	96	32	111
South Dakota School of Mines and Tech	128	0	0	0	0	33	25	70
South Dakota State University	117	0	1	5	0	63	7	41
University of South Dakota	0	0	0	0	0	0	0	0
South Atlantic	17,982	1,018	42	1,205	635	8,781	490	5,811
Delaware	405	3	0	6	1	182	11	202
Delaware State University	0	0	0	0	0	0	0	0
University of Delaware	405	3	0	6	1	182	11	202
District of Columbia	1,510	157	3	114	35	644	81	476
American University	0	0	0	0	0	0	0	0
Catholic University of America	121	15	0	8	3	40	9	46
Gallaudet University	0	0	0	0	0	0	0	0
George Washington University	1,325	92	3	105	31	603	70	421
Georgetown University	0	0	0	0	0	0	0	0
Howard University	64	50	0	1	1	1	2	9
University of the District of Columbia	0	0	0	0	0	0	0	0
Florida	3,938	193	11	279	390	1,728	120	1,217
Embry-Riddle Aeronautical University	25	1	0	0	0	14	0	10
Florida A&M University	74	37	2	1	5	15	14	0
Florida Atlantic University	217	8	0	11	23	67	0	108
Florida Institute of Technology	229	5	0	7	12	112	0	93
Florida International University	262	9	0	12	105	51	85	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Florida, continued:								
Florida State University	171	48	1	42	10	56	2	12
Jacksonville University	0	0	0	0	0	0	0	0
Nova Southeastern University	0	0	0	0	0	0	0	0
Stetson University	0	0	0	0	0	0	0	0
University of Central Florida	745	21	0	50	55	373	0	246
University of Florida	1,357	38	6	61	78	667	5	502
University of Miami	240	7	1	23	44	95	11	59
University of South Florida	618	19	1	72	58	278	3	187
University of West Florida	0	0	0	0	0	0	0	0
Georgia	2,896	163	1	157	55	1,440	145	935
Atlanta University	0	0	0	0	0	0	0	0
Augusta State University	0	0	0	0	0	0	0	0
Clark Atlanta University	0	0	0	0	0	0	0	0
Emory University	0	0	0	0	0	0	0	0
Fort Valley State College	0	0	0	0	0	0	0	0
Georgia College and State University	0	0	0	0	0	0	0	0
Georgia Institute of Technology	2,666	160	1	149	51	1,374	0	931
Georgia Southern University	0	0	0	0	0	0	0	0
Georgia State University	0	0	0	0	0	0	0	0
Institute of Paper Science & Technology	74	2	0	7	4	57	0	4
Medical College of Georgia	0	0	0	0	0	0	0	0
Mercer University	137	0	0	0	0	0	137	0
Morehouse School of Medicine	0	0	0	0	0	0	0	0
State University of West Georgia	0	0	0	0	0	0	0	0
University of Georgia	19	1	0	1	0	9	8	0
Valdosta State University	0	0	0	0	0	0	0	0
Maryland	2,246	149	3	173	42	959	54	866
Coppin State College	0	0	0	0	0	0	0	0
Frostburg State University	0	0	0	0	0	0	0	0
Hood College	0	0	0	0	0	0	0	0
Johns Hopkins University	344	5	0	17	2	179	7	134
Loyola College	183	22	0	7	4	124	18	8
Morgan State University	33	24	0	0	0	3	0	6
Towson University	0	0	0	0	0	0	0	0
Uniformed Serv Univ of the Hlth Sciences	0	0	0	0	0	0	0	0
Univ of Maryland - Baltimore County	174	4	0	21	0	78	0	71
University of Baltimore	0	0	0	0	0	0	0	0
University of Maryland - College Park	1,512	94	3	128	36	575	29	647
University of Maryland Eastern Shore	0	0	0	0	0	0	0	0
University of Maryland at Baltimore	0	0	0	0	0	0	0	0
Washington College	0	0	0	0	0	0	0	0
North Carolina	2,227	195	3	167	26	1,100	37	699
Appalachian State University	0	0	0	0	0	0	0	0
Duke University	333	2	0	42	2	158	27	102
East Carolina University	0	0	0	0	0	0	0	0
North Carolina A&T State University	240	116	0	20	2	24	10	68
North Carolina Central University	0	0	0	0	0	0	0	0
North Carolina State University	1,410	68	3	84	18	779	0	458
Univ of North Carolina at Chapel Hill	71	4	0	5	3	48	0	11
Univ of North Carolina at Charlotte	164	4	0	15	1	86	0	58
Univ of North Carolina at Greensboro	0	0	0	0	0	0	0	0
University of North Carolina/Wilmington	0	0	0	0	0	0	0	0
Wake Forest University	9	1	0	1	0	5	0	2
Western Carolina University	0	0	0	0	0	0	0	0
South Carolina	890	20	0	64	8	426	22	350
Clemson University	600	11	0	5	6	295	11	272

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
South Carolina, continued:								
College of Charleston	0	0	0	0	0	0	0	0
Furman University	0	0	0	0	0	0	0	0
Medical University of South Carolina	0	0	0	0	0	0	0	0
University of South Carolina	290	9	0	59	2	131	11	78
Winthrop University	0	0	0	0	0	0	0	0
Virginia	3,172	123	21	212	71	1,884	15	846
College of William and Mary	40	1	0	1	1	24	0	13
Eastern Virginia Medical School	0	0	0	0	0	0	0	0
George Mason University	577	43	0	77	18	377	0	62
Hampton University	0	0	0	0	0	0	0	0
Hollins University	0	0	0	0	0	0	0	0
Institute of Textile Technology	27	1	0	0	0	26	0	0
James Madison University	0	0	0	0	0	0	0	0
Lynchburg College	0	0	0	0	0	0	0	0
Old Dominion University	346	17	1	9	5	166	15	133
Radford University	0	0	0	0	0	0	0	0
University of Richmond	0	0	0	0	0	0	0	0
University of Virginia	550	13	0	24	10	391	0	112
Virginia Commonwealth University	26	1	0	0	0	12	0	13
Virginia Polytechnic Inst and State Univ	1,606	47	20	101	37	888	0	513
Virginia State University	0	0	0	0	0	0	0	0
West Virginia	698	15	0	33	7	418	5	220
Marshall University	144	0	0	2	0	130	5	7
University of Charleston	0	0	0	0	0	0	0	0
West Virginia Graduate College	0	0	0	0	0	0	0	0
West Virginia University	538	15	0	17	7	286	0	213
West Virginia University Institute of Te	16	0	0	14	0	2	0	0
East South Central	4,199	234	10	214	33	2,281	47	1,380
Alabama	1,430	101	3	78	14	797	19	418
Alabama A&M University	0	0	0	0	0	0	0	0
Alabama State University	0	0	0	0	0	0	0	0
Auburn University	392	16	0	4	4	199	6	163
Jacksonville State University	0	0	0	0	0	0	0	0
Troy State University in Montgomery	0	0	0	0	0	0	0	0
Tuskegee University	51	23	0	0	0	0	6	22
University of Alabama at Birmingham, The	248	26	0	28	2	154	5	33
University of Alabama in Huntsville, The	401	24	3	11	6	294	0	63
University of Alabama, The	266	11	0	32	1	126	2	94
University of Montevallo	0	0	0	0	0	0	0	0
University of South Alabama	72	1	0	3	1	24	0	43
Kentucky	760	18	1	25	10	444	13	249
Eastern Kentucky University	0	0	0	0	0	0	0	0
Morehead State University	0	0	0	0	0	0	0	0
Murray State University	0	0	0	0	0	0	0	0
Spalding University	0	0	0	0	0	0	0	0
University of Kentucky	334	3	0	3	4	157	13	154
University of Louisville	426	15	1	22	6	287	0	95
Western Kentucky University	0	0	0	0	0	0	0	0
Mississippi	423	20	0	36	3	187	6	171
Jackson State University	0	0	0	0	0	0	0	0
Mississippi State University	331	16	0	20	3	155	0	137
Mississippi University for Women	0	0	0	0	0	0	0	0
University of Mississippi	92	4	0	16	0	32	6	34
University of Southern Mississippi	0	0	0	0	0	0	0	0
Tennessee	1,586	95	6	75	6	853	9	542
Austin Peay State University	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
State, institution, and citizenship, and by racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Tennessee, continued:								
East Tennessee State University	0	0	0	0	0	0	0	0
Fisk University	0	0	0	0	0	0	0	0
Meharry Medical College	0	0	0	0	0	0	0	0
Middle Tennessee State University	0	0	0	0	0	0	0	0
Tennessee State University	74	17	0	7	0	14	0	36
Tennessee Technological University	160	1	0	0	0	45	0	114
University of Memphis	236	23	0	26	0	115	6	66
University of Tennessee at Chattanooga	86	7	0	2	2	57	0	18
University of Tennessee at Knoxville	636	27	3	19	2	455	0	130
University of Tennessee, Memphis	39	2	0	1	1	13	1	21
Vanderbilt University	355	18	3	20	1	154	2	157
West South Central	10,152	212	47	750	374	3,898	260	4,611
Arkansas	534	24	3	27	11	277	39	153
Arkansas State University	0	0	0	0	0	0	0	0
University of Arkansas - Med Sci Campus	0	0	0	0	0	0	0	0
University of Arkansas Main	534	24	3	27	11	277	39	153
University of Arkansas at Little Rock	0	0	0	0	0	0	0	0
University of Central Arkansas	0	0	0	0	0	0	0	0
Louisiana	1,043	30	4	26	14	382	11	576
Grambling State University	0	0	0	0	0	0	0	0
Louisiana State University	588	17	4	14	6	175	8	364
Louisiana Tech University	171	0	0	1	0	69	0	101
Loyola University New Orleans	0	0	0	0	0	0	0	0
McNeese State University	24	0	0	4	1	19	0	0
Nicholls State University	0	0	0	0	0	0	0	0
Northeast Louisiana University	0	0	0	0	0	0	0	0
Northwestern State University	0	0	0	0	0	0	0	0
Southeastern Louisiana University	0	0	0	0	0	0	0	0
Southern University A & M, All Campuses	0	0	0	0	0	0	0	0
Tulane University	178	10	0	6	7	96	2	57
University of Southwestern Louisiana	82	3	0	1	0	23	1	54
Xavier University of Louisiana	0	0	0	0	0	0	0	0
Oklahoma	1,252	17	23	36	16	480	18	662
East Central University	0	0	0	0	0	0	0	0
Northeastern State University	50	3	10	0	0	33	4	0
Oklahoma State University	680	9	9	20	11	305	0	326
Oral Roberts University	0	0	0	0	0	0	0	0
Southwestern Oklahoma State University	0	0	0	0	0	0	0	0
University of Oklahoma	402	5	3	13	5	121	10	245
University of Tulsa	120	0	1	3	0	21	4	91
Texas	7,323	141	17	661	333	2,759	192	3,220
Abilene Christian University	0	0	0	0	0	0	0	0
Angelo State University	0	0	0	0	0	0	0	0
Baylor College of Dentistry	0	0	0	0	0	0	0	0
Baylor College of Medicine	0	0	0	0	0	0	0	0
Baylor University	0	0	0	0	0	0	0	0
Lamar University	117	3	0	1	3	17	2	91
Midwestern State University	0	0	0	0	0	0	0	0
Prairie View A&M University	39	16	0	3	0	3	0	17
Rice University	232	4	1	16	6	83	0	122
Sam Houston State University	0	0	0	0	0	0	0	0
Southern Methodist University	836	27	2	92	24	471	35	185
Southwest Texas State University	0	0	0	0	0	0	0	0
St. Mary's University	47	2	0	1	7	28	2	7
Stephen F. Austin State University	0	0	0	0	0	0	0	0
Sul Ross State University	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Texas, continued:								
Tarleton State University	0	0	0	0	0	0	0	0
Texas A&M University	1,439	23	0	41	46	487	130	712
Texas A&M University-Commerce	0	0	0	0	0	0	0	0
Texas A&M University-Corpus Christi	0	0	0	0	0	0	0	0
Texas A&M University-Kingsville	141	0	0	1	23	22	0	95
Texas Christian University	0	0	0	0	0	0	0	0
Texas Southern University	0	0	0	0	0	0	0	0
Texas Tech University	434	3	3	7	15	182	7	217
Texas Woman's University	0	0	0	0	0	0	0	0
Trinity University	0	0	0	0	0	0	0	0
U of North TX Hlth Sci Ctr at Ft Worth	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr San Antonio	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr at Houston	0	0	0	0	0	0	0	0
Univ of Texas M.D. Anderson Cancer Ctr	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston	0	0	0	0	0	0	0	0
Univ of Texas SW Medical Ctr at Dallas	27	1	0	15	1	10	0	0
University of Central Texas	0	0	0	0	0	0	0	0
University of Houston	626	14	1	188	28	214	8	173
University of Houston - Victoria	0	0	0	0	0	0	0	0
University of Houston Clear Lake	82	2	0	7	4	63	0	6
University of Incarnate Word	0	0	0	0	0	0	0	0
University of North Texas	22	1	0	0	0	12	1	8
University of Texas at Arlington	542	10	3	53	17	220	0	239
University of Texas at Austin	1,704	23	5	92	53	685	7	839
University of Texas at Dallas	695	7	0	128	13	162	0	385
University of Texas at El Paso	204	1	1	4	71	30	0	97
University of Texas at San Antonio	109	4	1	11	21	50	0	22
University of Texas at Tyler	6	0	0	1	0	5	0	0
University of Texas of the Permian Basin	0	0	0	0	0	0	0	0
University of Texas-Pan American	0	0	0	0	0	0	0	0
West Texas A&M University	21	0	0	0	1	15	0	5
Mountain	6,645	58	30	305	251	3,395	425	2,181
Arizona	1,704	16	4	95	66	667	57	799
Arizona State University	1,144	11	3	55	48	420	54	553
Northern Arizona University	0	0	0	0	0	0	0	0
University of Arizona	560	5	1	40	18	247	3	246
Colorado	2,340	30	9	133	67	1,411	120	570
Colorado School of Mines	300	0	2	11	8	160	5	114
Colorado State University	345	3	1	6	9	205	0	121
National Technological University	588	16	3	68	19	394	26	62
University of Colorado	1,081	11	3	40	31	635	88	273
University of Denver	26	0	0	8	0	17	1	0
University of Northern Colorado	0	0	0	0	0	0	0	0
Western State College	0	0	0	0	0	0	0	0
Idaho	317	1	1	11	13	222	3	66
Idaho State University	35	0	0	2	3	21	0	9
University of Idaho	282	1	1	9	10	201	3	57
Montana	179	0	3	2	1	131	7	35
Montana State University-Bozeman	128	0	2	1	1	84	5	35
Montana Tech of the Univ of Montana	51	0	1	1	0	47	2	0
University of Montana	0	0	0	0	0	0	0	0
Nevada	344	4	0	30	9	193	20	88
University of Nevada at Las Vegas	183	4	0	24	6	109	13	27

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Nevada, continued:								
University of Nevada, Reno	161	0	0	6	3	84	7	61
New Mexico	664	6	9	12	88	187	144	218
Eastern New Mexico University	0	0	0	0	0	0	0	0
New Mexico Highlands University	0	0	0	0	0	0	0	0
New Mexico Institute of Mining and Tech	63	0	0	0	3	21	0	39
New Mexico State University	269	2	2	5	38	0	137	85
University of New Mexico	332	4	7	7	47	166	7	94
Utah	978	1	4	22	6	517	59	369
Brigham Young University	174	1	0	11	3	138	3	18
University of Utah	460	0	3	10	3	192	56	196
Utah State University	344	0	1	1	0	187	0	155
Wyoming	119	0	0	0	1	67	15	36
University of Wyoming	119	0	0	0	1	67	15	36
Pacific	14,932	275	51	2,679	579	5,364	669	5,315
Alaska	114	2	3	9	0	77	3	20
University of Alaska Anchorage	44	0	3	5	0	34	2	0
University of Alaska Fairbanks	70	2	0	4	0	43	1	20
University of Alaska Southeast	0	0	0	0	0	0	0	0
California	12,438	247	37	2,408	546	4,240	585	4,375
Azusa Pacific University	0	0	0	0	0	0	0	0
Biola University	0	0	0	0	0	0	0	0
Cal Sch of Prof Psych Berkeley/Alameda	0	0	0	0	0	0	0	0
Calif Poly State Univ, San Luis Obispo	109	0	0	1	0	55	0	53
Calif Sch of Prof Psych - Fresno	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych - Los Angeles	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych - San Diego	0	0	0	0	0	0	0	0
Calif State Univ at Dominguez Hills	22	3	1	5	3	5	1	4
Calif State Univ at Fullerton	132	2	0	31	7	28	9	55
Calif State Univ at Los Angeles	128	7	0	52	20	17	4	28
Calif State University at Sacramento	331	7	6	85	47	101	36	49
Calif State University, Stanislaus	0	0	0	0	0	0	0	0
California Institute of Integral Studies	0	0	0	0	0	0	0	0
California Institute of Technology	384	4	0	30	11	153	0	186
California State Poly University, Pomona	231	2	1	92	8	71	23	34
California State Univ - Bakersfield	0	0	0	0	0	0	0	0
California State Univ, San Bernardino	0	0	0	0	0	0	0	0
California State University, Chico	6	0	0	1	0	2	1	2
California State University, Fresno	14	0	0	4	0	4	3	3
California State University, Hayward	0	0	0	0	0	0	0	0
California State University, Long Beach	349	12	2	103	38	113	24	57
California State University, Northridge	327	11	4	66	37	141	42	26
Chapman University	0	0	0	0	0	0	0	0
Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
Claremont Graduate School	0	0	0	0	0	0	0	0
Dominican College of San Rafael	0	0	0	0	0	0	0	0
Fielding Institute, The	0	0	0	0	0	0	0	0
Fuller Theological Seminary	0	0	0	0	0	0	0	0
Golden Gate University	0	0	0	0	0	0	0	0
Harvey Mudd College	6	0	0	1	0	5	0	0
Humboldt State University	52	0	1	1	3	37	8	2
John F Kennedy University	0	0	0	0	0	0	0	0
Loma Linda University	0	0	0	0	0	0	0	0
Loyola Marymount University	89	7	1	21	10	36	12	2
Monterey Inst of Intl Studies	0	0	0	0	0	0	0	0

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**Table 32. Graduate engineering students in all institutions, by geographic division,
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Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
California, continued:								
National University	164	8	0	34	8	93	4	17
Northrop University	0	0	0	0	0	0	0	0
Occidental College	0	0	0	0	0	0	0	0
Pacific Graduate School of Psychology	0	0	0	0	0	0	0	0
Pacific States University	0	0	0	0	0	0	0	0
Pepperdine University	0	0	0	0	0	0	0	0
RAND Graduate School of Policy Studies	0	0	0	0	0	0	0	0
San Diego State University	196	9	0	32	29	73	30	23
San Francisco State University	53	0	1	12	5	13	6	16
San Jose State University	814	20	1	427	28	138	69	131
Santa Clara University	423	6	1	135	18	135	44	84
Sonoma State University	0	0	0	0	0	0	0	0
Stanford University	2,405	47	6	357	88	924	45	938
US International University	0	0	0	0	0	0	0	0
US Naval Postgraduate School	396	2	0	19	2	174	0	199
University of Calif at Berkeley	1,451	40	4	216	52	590	53	496
University of Calif at Davis	595	8	3	79	22	284	39	160
University of Calif at Riverside	0	0	0	0	0	0	0	0
University of Calif at San Diego	444	5	1	57	17	203	26	135
University of Calif at San Francisco	35	4	0	6	4	21	0	0
University of Calif at Santa Barbara	409	3	1	30	7	182	22	164
University of Calif at Santa Cruz	79	1	0	10	1	30	6	31
University of California, Irvine	311	3	0	68	10	78	21	131
University of California, Los Angeles	751	14	3	183	26	206	36	283
University of La Verne	0	0	0	0	0	0	0	0
University of Redlands	0	0	0	0	0	0	0	0
University of San Diego	0	0	0	0	0	0	0	0
University of San Franciso	0	0	0	0	0	0	0	0
University of Southern California	1,732	22	0	250	45	328	21	1,066
University of the Pacific	0	0	0	0	0	0	0	0
West Coast University	0	0	0	0	0	0	0	0
Wright Institute, The	0	0	0	0	0	0	0	0
Hawaii	200	1	0	49	3	21	8	118
University of Hawaii at Manoa	200	1	0	49	3	21	8	118
Oregon	808	4	4	105	7	321	31	336
Oregon Grad Inst of Science & Technology	117	2	0	71	1	39	4	0
Oregon Health Sciences University	0	0	0	0	0	0	0	0
Oregon State University	388	1	3	17	1	146	12	208
Pacific University	0	0	0	0	0	0	0	0
Portland State University	290	1	1	17	5	135	15	116
Southern Oregon State College	0	0	0	0	0	0	0	0
University of Oregon	0	0	0	0	0	0	0	0
University of Portland	13	0	0	0	0	1	0	12
Washington	1,372	21	7	108	23	705	42	466
Central Washington University	0	0	0	0	0	0	0	0
Eastern Washington University	0	0	0	0	0	0	0	0
Gonzaga University	2	0	0	0	0	0	0	2
Pacific Lutheran University	0	0	0	0	0	0	0	0
Saint Martin's College	13	0	0	2	0	11	0	0
Seattle University	74	5	2	11	1	36	9	10
University of Washington	1,015	14	5	92	19	533	33	319
Walla Walla College	0	0	0	0	0	0	0	0
Washington State University	268	2	0	3	3	125	0	135
Western Washington University	0	0	0	0	0	0	0	0
Whitworth College	0	0	0	0	0	0	0	0
Outlying Areas	267	0	0	0	218	1	0	48

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division,
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		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Guam	0	0	0	0	0	0	0	0
University of Guam	0	0	0	0	0	0	0	0
Puerto Rico	267	0	0	0	218	1	0	48
Caribbean Center for Advanced Studies	0	0	0	0	0	0	0	0
Ponce School of Medicine	0	0	0	0	0	0	0	0
The Pontifical Cath Univ of Puerto Rico	0	0	0	0	0	0	0	0
Univ of Puerto Rico Mayaguez Campus	267	0	0	0	218	1	0	48
Univ of Puerto Rico Rio Piedras Campus	0	0	0	0	0	0	0	0
University of Puerto Rico Med Sci Campus	0	0	0	0	0	0	0	0

NOTE: Includes medical schools

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 33. Graduate students in science, engineering, and health fields in doctorate-granting institutions,
by detailed field: 1991-1998**

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Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	416,646	435,696	443,757	444,093	438,306	432,812	426,032	422,834
Total, science and engineering fields	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
Sciences, total	260,757	272,133	277,035	276,789	273,727	271,056	265,720	263,134
Physical sciences, total	33,007	33,691	33,583	32,768	31,791	30,832	29,652	29,120
Astronomy	829	869	880	973	912	874	778	820
Chemistry	18,384	18,916	19,072	18,760	18,540	18,321	17,774	17,403
Physics	13,600	13,692	13,423	12,752	12,073	11,404	10,901	10,588
Physical sciences, n.e.c.	194	214	208	283	266	233	199	309
Earth, atmos., & ocean sci., total	13,209	13,855	14,134	14,327	14,144	13,682	12,986	12,760
Atmospheric sciences	956	1,076	1,095	1,090	1,062	1,079	1,081	954
Geosciences	7,131	7,305	7,360	7,299	7,156	6,875	6,543	6,274
Oceanography	2,274	2,402	2,473	2,678	2,549	2,462	2,313	2,395
Earth, atmos., & ocean sci., n.e.c.	2,848	3,072	3,206	3,260	3,377	3,266	3,049	3,137
Mathematical sciences, total	17,910	18,242	17,763	17,440	16,408	15,995	14,833	14,438
Mathematics & applied mathematics	15,212	15,356	14,786	14,402	13,380	13,003	12,202	11,848
Statistics	2,698	2,886	2,977	3,038	3,028	2,992	2,631	2,590
Computer sciences	28,423	29,900	30,220	28,866	28,270	29,111	30,092	31,067
Agricultural sciences	10,847	11,183	11,252	11,474	11,593	11,229	11,078	11,021
Biological sciences, total	48,284	50,375	52,275	53,833	54,109	53,680	52,870	52,704
Anatomy	1,051	1,030	1,027	1,079	1,056	1,111	1,094	1,015
Biochemistry	5,160	5,333	5,455	5,567	5,493	5,203	5,040	5,085
Biology	10,628	11,068	11,308	11,188	11,004	11,312	11,502	11,090
Biometry/epidemiology	2,031	2,365	2,658	2,710	2,812	3,001	2,900	3,484
Biophysics	697	751	780	794	845	833	748	737
Botany	2,673	2,665	2,705	2,741	2,605	2,501	2,396	2,319
Cell biology	2,809	3,093	3,362	3,753	3,874	3,870	3,807	3,902
Ecology	1,079	1,155	1,251	1,420	1,508	1,497	1,511	1,561
Entomology/parasitology	1,171	1,193	1,247	1,263	1,241	1,234	1,161	1,168
Genetics	1,478	1,599	1,733	1,649	1,651	1,679	1,713	1,660
Microbio., immunology, & virology	4,890	4,932	5,037	5,114	5,045	4,937	4,829	4,802
Nutrition	3,936	3,866	4,034	4,244	4,449	4,365	4,224	4,062
Pathology	1,378	1,379	1,485	1,603	1,575	1,583	1,621	1,514
Pharmacology	2,432	2,529	2,643	2,830	2,700	2,652	2,582	2,694
Physiology	2,332	2,317	2,372	2,378	2,540	2,377	2,298	2,169
Zoology	2,168	2,117	2,115	2,085	2,063	1,907	1,723	1,670
Biosciences, n.e.c.	2,371	2,983	3,063	3,415	3,648	3,618	3,721	3,772
Psychology, total	38,585	40,011	40,326	40,399	39,721	39,417	39,884	39,789
Psychology, general	13,537	13,474	12,957	12,688	12,143	11,333	11,773	11,946
Clinical psychology	9,658	10,635	10,969	10,966	11,007	11,311	11,588	11,470
Psychology, n.e.c.	15,390	15,902	16,400	16,745	16,571	16,773	16,523	16,373
Social sciences, total	70,492	74,876	77,482	77,682	77,691	77,110	74,325	72,235
Agricultural economics	2,311	2,454	2,334	2,222	2,292	2,085	2,015	1,965
Anthropology (cultural & social)	6,480	6,862	7,114	7,414	7,419	7,491	7,238	7,213
Economics (except agricultural)	11,946	12,400	12,415	12,197	11,933	11,369	10,507	10,107
Geography	3,203	3,504	3,751	3,863	3,834	3,827	3,760	3,763
History and philosophy of science	337	360	369	387	401	409	443	449
Linguistics	3,135	2,930	2,947	2,937	2,857	2,848	2,733	2,610
Political science	26,280	28,197	29,390	28,596	28,304	27,482	26,027	25,034
Sociology	7,489	8,003	8,347	8,359	8,385	8,249	8,170	7,832
Sociology/anthropology	824	902	841	877	840	850	874	850
Social sciences, n.e.c.	8,487	9,264	9,974	10,830	11,426	12,500	12,558	12,412
Engineering, total	105,690	109,790	109,003	105,741	100,146	96,662	94,704	93,785
Aerospace engineering	4,053	3,999	3,905	3,653	3,287	3,140	3,029	3,096
Agricultural engineering	983	1,008	1,018	1,061	1,037	1,012	941	925
Biomedical engineering	2,191	2,485	2,613	2,674	2,662	2,685	2,785	2,850
Chemical engineering	7,002	7,259	7,396	7,502	7,310	7,258	7,125	6,950
Civil engineering	16,122	18,035	18,015	18,407	17,795	17,231	15,920	15,335
Electrical engineering	32,313	33,416	32,546	30,529	28,242	27,373	28,292	28,897
Engineering science	2,124	2,185	2,148	2,069	1,945	1,741	1,636	1,685
Industrial/manufacturing eng.	11,520	12,371	12,467	12,575	11,981	11,350	10,668	10,082
Mechanical engineering	16,638	17,538	17,461	16,886	15,625	14,753	14,279	13,868
Metallurgical/materials eng.	5,035	5,353	5,216	5,071	4,821	4,643	4,572	4,567
Mining engineering	475	426	411	399	362	351	333	290
Nuclear engineering	1,282	1,286	1,306	1,246	1,154	980	868	821
Petroleum engineering	699	729	717	612	594	551	557	567
Engineering, n.e.c.	5,253	3,700	3,784	3,057	3,331	3,594	3,699	3,852

See explanatory information, if any, and SOURCE at end of table.

**Table 33. Graduate students in science, engineering, and health fields in doctorate-granting institutions,
by detailed field: 1991-1998**

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Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields	50,199	53,773	57,719	61,563	64,433	65,094	65,608	65,915
Medical fields, total	11,218	11,978	13,349	14,182	14,725	14,587	14,438	15,471
Anesthesiology	443	511	494	516	529	647	616	650
Cardiology	2	8	11	14	19	18	48	51
Oncology/cancer research	156	197	209	208	189	185	198	209
Endocrinology	66	71	63	63	53	46	43	58
Gastroenterology	0	0	1	0	0	0	3	6
Hematology	4	5	3	2	1	3	3	1
Neurology	1,003	1,149	1,311	1,455	1,554	1,632	1,696	1,765
Obstetrics and gynecology	10	3	3	4	6	4	18	13
Ophthalmology	32	27	19	32	30	33	33	38
Otorhinolaryngology	3	0	1	2	0	0	2	0
Pediatrics	153	154	196	261	238	275	342	314
Preventive medicine/community health	8,183	8,533	9,595	10,078	10,575	10,205	9,824	10,787
Psychiatry	46	96	103	144	158	131	135	86
Pulmonary disease	0	0	0	0	0	0	0	0
Radiology	233	252	287	320	268	227	221	191
Surgery	69	76	82	119	174	167	221	174
Clinical medicine, n.e.c.	815	896	971	964	931	1,014	1,035	1,128
Other health fields, total	38,981	41,795	44,370	47,381	49,708	50,507	51,170	50,444
Dental sciences	1,016	1,121	1,135	1,199	1,251	1,291	1,411	1,471
Nursing	18,949	19,938	20,801	22,688	23,564	22,314	21,765	20,185
Pharmaceutical sciences	2,967	2,788	2,851	2,890	2,926	2,947	3,034	3,262
Speech pathology/audiology	6,773	7,562	8,050	8,476	8,735	9,234	9,490	9,502
Veterinary sciences	875	923	853	858	915	932	1,160	1,174
Health related, n.e.c.	8,401	9,463	10,680	11,270	12,317	13,789	14,310	14,850

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 34. Graduate students in science, engineering, and health fields in public doctorate-granting institutions, by detailed field: 1991-1998

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	290,576	303,933	308,998	309,414	305,230	300,788	295,475	292,008
Total, science and engineering fields	252,914	263,653	266,725	264,381	258,632	253,137	247,769	244,729
Sciences, total	178,187	185,601	188,877	188,828	186,843	184,061	180,244	177,798
Physical sciences, total	23,716	24,260	24,262	23,666	23,104	22,319	21,464	21,232
Astronomy	546	561	579	591	556	525	471	509
Chemistry	13,132	13,589	13,758	13,560	13,503	13,298	12,974	12,781
Physics	9,844	9,896	9,717	9,249	8,798	8,269	7,825	7,646
Physical sciences, n.e.c.	194	214	208	266	247	227	194	296
Earth, atmos., & ocean sci., total	10,769	11,322	11,562	11,610	11,717	11,396	10,873	10,659
Atmospheric sciences	936	1,051	1,077	1,071	1,037	1,059	1,057	933
Geosciences	5,771	5,917	5,959	5,885	5,827	5,615	5,348	5,088
Oceanography	1,841	1,948	1,996	2,119	2,109	2,048	1,922	2,012
Earth, atmos., & ocean sci., n.e.c.	2,221	2,406	2,530	2,535	2,744	2,674	2,546	2,626
Mathematical sciences	13,729	13,946	13,576	13,224	12,327	12,030	11,105	10,701
Computer sciences	16,847	17,490	17,708	17,149	17,118	17,278	18,337	18,665
Agricultural sciences	10,370	10,731	10,815	11,036	11,184	10,825	10,703	10,638
Biological sciences, total	35,116	36,667	37,955	39,005	38,747	38,331	37,549	37,478
Anatomy	765	742	760	805	779	793	778	701
Biochemistry	3,537	3,648	3,670	3,873	3,856	3,693	3,580	3,597
Biology	7,362	7,696	7,931	7,871	7,559	7,832	7,908	7,575
Biometry/epidemiology	1,225	1,562	1,728	1,732	1,724	1,777	1,734	2,138
Biophysics	387	417	426	415	472	459	419	417
Botany	2,505	2,539	2,566	2,621	2,466	2,364	2,253	2,183
Cell biology	1,587	1,824	2,077	2,270	2,342	2,371	2,333	2,492
Ecology	991	1,066	1,162	1,314	1,406	1,399	1,421	1,472
Entomology/parasitology	1,102	1,127	1,186	1,193	1,179	1,171	1,101	1,109
Genetics	1,058	1,133	1,147	1,083	1,077	1,119	1,144	1,075
Microbio., immunology, & virology	3,555	3,545	3,577	3,611	3,548	3,446	3,362	3,307
Nutrition	3,339	3,250	3,301	3,464	3,596	3,518	3,399	3,351
Pathology	987	982	982	1,046	1,023	1,026	1,010	1,008
Pharmacology	1,672	1,757	1,871	1,979	1,872	1,797	1,750	1,810
Physiology	1,530	1,526	1,559	1,521	1,548	1,439	1,373	1,359
Zoology	2,017	1,979	1,976	1,951	1,914	1,780	1,598	1,558
Biosciences, n.e.c.	1,497	1,874	2,036	2,256	2,386	2,347	2,386	2,326
Psychology	19,679	20,487	20,276	20,224	20,199	19,569	20,127	19,898
Social sciences, total	47,961	50,698	52,723	52,914	52,447	52,313	50,086	48,527
Agricultural economics	2,196	2,336	2,222	2,107	2,159	1,999	1,945	1,898
Anthropology (cultural & social)	4,714	4,944	5,210	5,395	5,328	5,396	5,172	5,150
Economics (except agricultural)	7,695	7,992	8,100	7,998	7,723	7,347	6,743	6,384
Geography	3,004	3,201	3,425	3,529	3,540	3,509	3,467	3,455
Linguistics	2,092	2,095	2,112	2,077	2,046	1,973	1,893	1,824
Political science	16,311	17,270	17,898	17,135	16,794	16,191	15,168	14,413
Sociology	5,650	5,923	6,171	6,174	6,180	6,136	6,049	5,899
Sociology/anthropology	543	622	652	694	652	669	709	693
Social sciences, other	5,756	6,315	6,933	7,805	8,025	9,093	8,940	8,811
Engineering, total	74,727	78,052	77,848	75,553	71,789	69,076	67,525	66,931
Aerospace engineering	3,213	3,173	3,102	2,872	2,549	2,399	2,310	2,295
Agricultural engineering	943	967	970	1,006	981	959	893	880
Biomedical engineering	1,282	1,497	1,601	1,601	1,620	1,671	1,824	1,842
Chemical engineering	5,082	5,322	5,446	5,523	5,361	5,269	5,101	4,992
Civil engineering	12,205	13,651	13,612	13,746	13,419	13,073	12,188	11,673
Electrical engineering	20,877	21,904	21,556	20,559	19,265	18,244	18,886	19,072
Engineering science	1,357	1,456	1,419	1,359	1,287	1,246	1,117	1,063
Industrial/manufacturing eng.	7,939	8,685	8,841	8,814	8,198	7,766	7,250	7,216
Mechanical engineering	12,200	13,054	12,930	12,505	11,695	11,151	10,713	10,684
Metallurgical/materials eng.	3,378	3,672	3,646	3,596	3,395	3,266	3,215	3,164
Nuclear engineering	1,093	1,081	1,094	1,062	975	826	751	715
Engineering, other	5,158	3,590	3,631	2,910	3,044	3,206	3,277	3,335
Total, health fields	37,662	40,280	42,273	45,033	46,598	47,651	47,706	47,279
Clinical fields	1,280	1,456	1,510	1,675	1,630	1,751	1,870	1,844
Dental sciences	791	840	862	919	925	992	1,090	1,170
Nursing	14,810	15,609	16,333	18,116	18,654	17,881	17,451	16,193
Pharmaceutical sciences	2,243	2,258	2,349	2,335	2,385	2,429	2,488	2,578
Preventive medicine/community health	5,687	5,875	6,479	6,570	6,979	6,820	6,433	6,945
Speech pathology/audiology	5,702	6,269	6,419	6,770	6,919	7,399	7,537	7,423
Veterinary sciences	821	880	802	807	875	894	1,123	1,139
Other health fields	6,328	7,093	7,519	7,841	8,231	9,485	9,714	9,987

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 35. Graduate students in science, engineering, and health fields in private doctorate-granting institutions, by detailed field: 1991-1998

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	126,070	131,763	134,759	134,679	133,076	132,024	130,557	130,826
Total, science and engineering fields	113,533	118,270	119,313	118,149	115,241	114,581	112,655	112,190
Sciences, total	82,570	86,532	88,158	87,961	86,884	86,995	85,476	85,336
Physical sciences, total	9,291	9,431	9,321	9,102	8,687	8,513	8,188	7,888
Astronomy	283	308	301	382	356	349	307	311
Chemistry	5,252	5,327	5,314	5,200	5,037	5,023	4,800	4,622
Physics	3,756	3,796	3,706	3,503	3,275	3,135	3,076	2,942
Physical sciences, n.e.c.	0	0	0	17	19	6	5	13
Earth, atmos., & ocean sci., total	2,440	2,533	2,572	2,717	2,427	2,286	2,113	2,101
Atmospheric sciences	20	25	18	19	25	20	24	21
Geosciences	1,360	1,388	1,401	1,414	1,329	1,260	1,195	1,186
Oceanography	433	454	477	559	440	414	391	383
Earth, atmos., & ocean sci., n.e.c.	627	666	676	725	633	592	503	511
Mathematical sciences	4,181	4,296	4,187	4,216	4,081	3,965	3,728	3,737
Computer sciences	11,576	12,410	12,512	11,717	11,152	11,833	11,755	12,402
Agricultural sciences	477	452	437	438	409	404	375	383
Biological sciences, total	13,168	13,708	14,320	14,828	15,362	15,349	15,321	15,226
Anatomy	286	288	267	274	277	318	316	314
Biochemistry	1,623	1,685	1,785	1,694	1,637	1,510	1,460	1,488
Biology	3,266	3,372	3,377	3,317	3,445	3,480	3,594	3,515
Biometry/epidemiology	806	803	930	978	1,088	1,224	1,166	1,346
Biophysics	310	334	354	379	373	374	329	320
Botany	168	126	139	120	139	137	143	136
Cell biology	1,222	1,269	1,285	1,483	1,532	1,499	1,474	1,410
Ecology	88	89	89	106	102	98	90	89
Entomology/parasitology	69	66	61	70	62	63	60	59
Genetics	420	466	586	566	574	560	569	585
Microbio., immunology, & virology	1,335	1,387	1,460	1,503	1,497	1,491	1,467	1,495
Nutrition	597	616	733	780	853	847	825	711
Pathology	391	397	503	557	552	557	611	506
Pharmacology	760	772	772	851	828	855	832	884
Physiology	802	791	813	857	992	938	925	810
Zoology	151	138	139	134	149	127	125	112
Biosciences, n.e.c.	874	1,109	1,027	1,159	1,262	1,271	1,335	1,446
Psychology	18,906	19,524	20,050	20,175	19,522	19,848	19,757	19,891
Social sciences, total	22,531	24,178	24,759	24,768	25,244	24,797	24,239	23,708
Agricultural economics	115	118	112	115	133	86	70	67
Anthropology (cultural & social)	1,766	1,918	1,904	2,019	2,091	2,095	2,066	2,063
Economics (except agricultural)	4,251	4,408	4,315	4,199	4,210	4,022	3,764	3,723
Geography	199	303	326	334	294	318	293	308
Linguistics	1,043	835	835	860	811	875	840	786
Political science	9,969	10,927	11,492	11,461	11,510	11,291	10,859	10,621
Sociology	1,839	2,080	2,176	2,185	2,205	2,113	2,121	1,933
Sociology/anthropology	281	280	189	183	188	181	165	157
Social sciences, other	3,068	3,309	3,410	3,412	3,802	3,816	4,061	4,050
Engineering, total	30,963	31,738	31,155	30,188	28,357	27,586	27,179	26,854
Aerospace engineering	840	826	803	781	738	741	719	801
Agricultural engineering	40	41	48	55	56	53	48	45
Biomedical engineering	909	988	1,012	1,073	1,042	1,014	961	1,008
Chemical engineering	1,920	1,937	1,950	1,979	1,949	1,989	2,024	1,958
Civil engineering	3,917	4,384	4,403	4,661	4,376	4,158	3,732	3,662
Electrical engineering	11,436	11,512	10,990	9,970	8,977	9,129	9,406	9,825
Engineering science	767	729	729	710	658	495	519	622
Industrial/manufacturing eng.	3,581	3,686	3,626	3,761	3,783	3,584	3,418	2,866
Mechanical engineering	4,438	4,484	4,531	4,381	3,930	3,602	3,566	3,184
Metallurgical/materials eng.	1,657	1,681	1,570	1,475	1,426	1,377	1,357	1,403
Nuclear engineering	189	205	212	184	179	154	117	106
Engineering, other	1,269	1,265	1,281	1,158	1,243	1,290	1,312	1,374
Total, health fields	12,537	13,493	15,446	16,530	17,835	17,443	17,902	18,636
Clinical fields	752	840	933	974	966	999	1,048	1,075
Dental sciences	225	281	273	280	326	299	321	301
Nursing	4,139	4,329	4,468	4,572	4,910	4,433	4,314	3,992
Pharmaceutical sciences	724	530	502	555	541	518	546	684
Preventive medicine/community health	2,496	2,658	3,116	3,508	3,596	3,385	3,391	3,842
Speech pathology/audiology	1,071	1,293	1,631	1,706	1,816	1,835	1,953	2,079
Veterinary sciences	54	43	51	51	40	38	37	35
Other health fields	3,076	3,519	4,472	4,884	5,640	5,936	6,292	6,628

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 36. Graduate students in science and engineering fields in doctorate-granting institutions,
by enrollment status, citizenship, and racial/ethnic background
of U.S. citizens or permanent residents: 1991-1998**

Enrollment status, citizenship, and racial/ethnic background	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Total enrollment	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
Total U.S. citizens	263,312	277,651	285,049	284,700	279,330	273,855	265,838	259,926
Black, non-Hispanic	10,577	11,997	13,004	13,504	14,010	14,488	14,489	14,567
American Indian/Alaskan Native	937	1,030	1,099	1,199	1,277	1,316	1,364	1,370
Asian/Pacific Islander	15,488	18,264	20,660	23,062	22,414	22,514	22,470	22,625
Hispanic	9,518	10,504	11,399	11,359	11,962	12,393	12,710	12,971
White, non-Hispanic	214,099	222,593	224,913	223,867	215,434	209,252	200,235	193,691
Other or unknown	12,693	13,263	13,974	11,709	14,233	13,892	14,570	14,702
Students with temporary visas	103,135	104,272	100,989	97,830	94,543	93,863	94,586	96,993
Full-time enrollment	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Total U.S. citizens	172,601	183,353	189,678	191,755	188,722	185,548	180,435	176,474
Black, non-Hispanic	6,585	7,638	8,421	8,920	9,058	9,210	9,355	9,260
American Indian/Alaskan Native	636	743	812	871	956	977	998	985
Asian/Pacific Islander	10,529	12,395	14,238	16,110	15,655	15,645	15,678	16,017
Hispanic	6,461	6,990	7,510	7,517	8,306	8,475	8,701	8,985
White, non-Hispanic	141,615	148,368	150,841	151,887	146,811	143,430	137,428	132,907
Other or unknown	6,775	7,219	7,856	6,450	7,936	7,811	8,275	8,320
Students with temporary visas	88,815	90,055	86,931	83,857	80,948	80,974	82,176	84,051
Part-time enrollment	105,031	108,515	109,429	106,918	104,203	101,196	97,813	96,394
Total U.S. citizens	90,711	94,298	95,371	92,945	90,608	88,307	85,403	83,452
Black, non-Hispanic	3,992	4,359	4,583	4,584	4,952	5,278	5,134	5,307
American Indian/Alaskan Native	301	287	287	328	321	339	366	385
Asian/Pacific Islander	4,959	5,869	6,422	6,952	6,759	6,869	6,792	6,608
Hispanic	3,057	3,514	3,889	3,842	3,656	3,918	4,009	3,986
White, non-Hispanic	72,484	74,225	74,072	71,980	68,623	65,822	62,807	60,784
Other or unknown	5,918	6,044	6,118	5,259	6,297	6,081	6,295	6,382
Students with temporary visas	14,320	14,217	14,058	13,973	13,595	12,889	12,410	12,942

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 37. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	422,834	18,356	1,722	26,855	15,792	241,013	17,231	101,865
Total, science and engineering fields	356,919	14,567	1,370	22,625	12,971	193,691	14,702	96,993
Sciences, total	263,134	12,114	1,174	15,706	10,344	152,735	10,919	60,142
Physical sciences, total	29,120	773	60	1,614	797	14,522	968	10,386
Astronomy	820	9	2	32	12	507	45	213
Chemistry	17,403	536	43	1,049	540	8,971	508	5,756
Physics	10,588	218	14	516	220	4,878	373	4,369
Physical sciences, n.e.c.	309	10	1	17	25	166	42	48
Earth, atmos., & ocean sci., total	12,760	175	69	372	317	8,916	481	2,430
Atmospheric sciences	954	8	2	54	13	596	30	251
Geosciences	6,274	58	34	142	127	4,436	247	1,230
Oceanography	2,395	24	16	58	103	1,598	68	528
Earth, atmos., & ocean sci., n.e.c.	3,137	85	17	118	74	2,286	136	421
Mathematical sciences	14,438	454	30	924	344	7,090	531	5,065
Computer sciences	31,067	1,004	83	3,867	589	11,478	1,596	12,450
Agricultural sciences	11,021	212	57	272	337	7,336	256	2,551
Biological sciences, total	52,704	1,853	171	4,154	1,796	31,705	1,872	11,153
Anatomy	1,015	41	3	81	15	634	37	204
Biochemistry	5,085	140	13	514	156	2,712	126	1,424
Biology	11,090	523	36	624	471	6,906	604	1,926
Biometry/epidemiology	3,484	181	6	357	153	1,883	227	677
Biophysics	737	18	1	90	14	377	71	166
Botany	2,319	58	3	92	56	1,374	63	673
Cell biology	3,902	102	11	411	119	2,334	107	818
Ecology	1,561	16	5	46	40	1,251	33	170
Entomology/parasitology	1,168	11	3	37	26	778	22	291
Genetics	1,660	43	3	123	51	1,027	32	381
Microbio., immunology, & virology	4,802	174	18	437	184	2,856	144	989
Nutrition	4,062	172	14	227	148	2,394	74	1,033
Pathology	1,514	39	10	162	38	919	61	285
Pharmacology	2,694	120	6	297	88	1,557	57	569
Physiology	2,169	95	10	265	70	1,238	53	438
Zoology	1,670	17	9	62	36	1,277	73	196
Biosciences, n.e.c.	3,772	103	20	329	131	2,188	88	913
Psychology	39,789	2,499	248	1,612	2,505	29,079	1,876	1,970
Social sciences, total	72,235	5,144	456	2,891	3,659	42,609	3,339	14,137
Agricultural economics	1,965	46	5	54	42	858	60	900
Anthropology (cultural & social)	7,213	253	115	221	304	5,342	253	725
Economics (except agricultural)	10,107	256	16	542	251	3,629	363	5,050
Geography	3,763	87	10	86	82	2,758	209	531
Linguistics	2,610	45	8	147	130	1,235	102	943
Political science	25,034	2,471	133	962	1,554	15,369	1,215	3,330
Sociology	7,832	736	63	369	484	4,879	245	1,056
Sociology/anthropology	850	92	8	9	41	523	67	110
Social sciences, other	12,861	1,158	98	501	771	8,016	825	1,492
Engineering, total	93,785	2,453	196	6,919	2,627	40,956	3,783	36,851
Aerospace engineering	3,096	33	7	138	74	1,372	70	1,402
Agricultural engineering	925	27	4	43	15	403	27	406
Biomedical engineering	2,850	86	7	265	79	1,577	113	723
Chemical engineering	6,950	172	21	450	174	3,077	220	2,836
Civil engineering	15,335	367	33	917	637	8,057	544	4,780
Electrical engineering	28,897	746	30	2,920	719	9,675	1,306	13,501
Engineering science	1,685	38	6	187	42	832	28	552
Industrial/manufacturing eng.	10,082	399	14	531	329	4,953	566	3,290
Mechanical engineering	13,868	336	24	885	360	6,264	541	5,458
Metallurgical/materials eng.	4,567	72	32	258	81	2,021	122	1,981
Nuclear engineering	821	13	2	36	22	449	5	294
Engineering, other	4,709	164	16	289	95	2,276	241	1,628

See explanatory information, if any, and SOURCE at end of table.

Table 37. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields	65,915	3,789	352	4,230	2,821	47,322	2,529	4,872
Clinical fields	2,919	137	21	371	87	1,870	192	241
Dental sciences	1,471	34	1	144	120	811	19	342
Nursing	20,185	1,211	130	737	636	16,207	814	450
Pharmaceutical sciences	3,262	134	2	305	135	1,392	117	1,177
Preventive medicine/community health	10,787	1,088	69	1,230	733	6,016	449	1,202
Speech pathology/audiology	9,502	409	42	198	368	7,785	355	345
Veterinary sciences	1,174	29	7	44	29	779	7	279
Other health fields	16,615	747	80	1,201	713	12,462	576	836

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 38. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field: 1991-1998

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Total, science and engineering fields	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Sciences, total	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Physical sciences, total	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Astronomy	810	840	848	953	871	854	768	787
Chemistry	16,337	16,654	16,800	16,701	16,338	16,073	15,583	15,281
Physics	12,198	12,452	12,180	11,543	10,850	10,243	9,795	9,539
Physical sciences, n.e.c.	108	128	118	164	174	147	122	121
Earth, atmos., & ocean sci., total	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Atmospheric sciences	857	958	978	981	956	977	964	854
Geosciences	5,535	5,708	5,799	5,776	5,608	5,394	5,221	5,045
Oceanography	1,931	2,061	2,130	2,263	2,183	2,038	1,924	2,005
Earth, atmos., & ocean sci., n.e.c.	1,600	1,758	1,892	1,864	1,981	1,846	1,825	2,048
Mathematical sciences	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Computer sciences	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Agricultural sciences	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Biological sciences, total	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Anatomy	961	960	977	983	978	1,042	1,033	961
Biochemistry	4,940	5,030	5,138	5,201	5,165	4,949	4,776	4,837
Biology	8,292	8,444	8,634	8,694	8,562	8,539	8,800	8,554
Biometry/epidemiology	1,431	1,634	1,990	2,056	2,093	2,162	2,005	2,559
Biophysics	679	728	755	770	800	807	728	707
Botany	2,286	2,279	2,351	2,345	2,146	2,128	2,049	1,989
Cell biology	2,716	2,961	3,186	3,592	3,692	3,669	3,649	3,728
Ecology	908	976	1,040	1,187	1,276	1,239	1,184	1,207
Entomology/parasitology	1,014	1,016	1,039	1,066	1,041	1,027	995	1,000
Genetics	1,371	1,488	1,640	1,553	1,572	1,605	1,620	1,579
Microbio., immunology, & virology	4,401	4,445	4,600	4,698	4,666	4,531	4,408	4,403
Nutrition	2,823	2,774	2,910	3,072	3,272	3,296	3,127	2,975
Pathology	1,085	1,138	1,264	1,359	1,350	1,339	1,418	1,327
Pharmacology	2,304	2,397	2,499	2,672	2,529	2,499	2,446	2,533
Physiology	2,163	2,160	2,220	2,221	2,376	2,217	2,102	1,990
Zoology	1,760	1,768	1,743	1,712	1,741	1,625	1,513	1,418
Biosciences, n.e.c.	2,148	2,634	2,673	3,029	3,176	3,163	3,210	3,287
Psychology	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Social sciences, total	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Agricultural economics	1,976	2,069	1,910	1,892	1,948	1,759	1,697	1,650
Anthropology (cultural & social)	4,987	5,231	5,332	5,718	5,662	5,866	5,626	5,549
Economics (except agricultural)	9,543	9,816	9,777	9,654	9,402	9,232	8,542	8,317
Geography	2,325	2,567	2,760	2,831	2,741	2,757	2,714	2,667
Linguistics	2,510	2,401	2,447	2,420	2,382	2,433	2,272	2,144
Political science	14,545	16,104	16,860	16,411	16,022	16,074	15,446	14,736
Sociology	5,606	6,080	6,167	6,295	6,284	6,165	6,188	5,972
Sociology/anthropology	583	612	613	644	617	590	631	608
Social sciences, other	5,418	5,973	6,307	6,925	7,538	8,336	8,493	8,185
Engineering, total	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Aerospace engineering	3,258	3,269	3,227	2,967	2,668	2,545	2,505	2,544
Agricultural engineering	823	840	835	879	859	799	748	756
Biomedical engineering	1,900	2,138	2,234	2,246	2,277	2,281	2,411	2,475
Chemical engineering	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Civil engineering	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Electrical engineering	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Engineering science	1,357	1,408	1,395	1,343	1,241	1,054	1,016	1,111
Industrial/manufacturing eng.	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Mechanical engineering	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Metallurgical/materials eng.	4,038	4,255	4,226	4,084	3,864	3,687	3,646	3,677
Nuclear engineering	1,080	1,084	1,070	997	883	771	708	662
Engineering, other	3,854	3,157	3,218	2,708	2,744	2,907	2,789	2,727
Total, health fields	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Clinical fields	1,682	1,873	2,048	2,190	2,171	2,234	2,486	2,474
Dental sciences	875	988	1,005	1,048	1,096	1,116	1,235	1,283
Nursing	5,674	5,627	5,975	6,770	7,211	7,195	7,518	7,309
Pharmaceutical sciences	2,198	2,074	2,130	2,188	2,152	2,225	2,234	2,214
Preventive medicine/community health	4,371	4,750	5,240	5,342	5,850	5,688	5,539	6,376
Speech pathology/audiology	5,141	5,708	6,295	6,651	6,730	7,153	7,387	7,498
Veterinary sciences	706	743	673	679	719	722	972	958
Other health fields	6,187	7,055	8,220	9,337	10,526	11,865	12,356	12,907

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields:								
Total, all sources	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Federal, total	61,708	64,280	66,380	67,003	65,896	64,029	63,277	62,817
Dept. of Defense	9,043	9,134	9,641	9,315	9,160	8,625	8,894	8,218
Dept. of HHS, total	20,142	21,125	21,663	22,198	22,299	21,929	21,996	22,385
NIH	15,922	16,980	17,969	18,125	17,978	17,837	17,964	18,181
Other HHS	4,220	4,145	3,694	4,073	4,321	4,092	4,032	4,204
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,226	2,501	2,538
NSF	12,598	13,293	13,410	13,764	13,538	13,339	13,313	13,450
USDA	3,042	3,168	3,271	3,364	3,200	2,946	2,596	2,395
All other Federal	16,883	17,560	18,395	18,362	17,699	14,964	13,977	13,831
Institutional support	120,572	122,729	123,994	124,163	124,186	122,943	123,372	122,790
Other non-Federal support, total	26,690	27,390	26,323	26,811	25,464	24,861	24,563	25,815
All other U.S.	20,126	21,010	20,892	21,147	19,982	19,666	19,776	21,617
Foreign	6,564	6,380	5,431	5,664	5,482	5,195	4,787	4,198
Self-support	79,280	87,827	91,498	91,840	90,579	92,887	91,126	90,122
Total, science and engineering:								
Total, all sources	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Federal, total	55,166	57,327	59,469	59,788	58,540	57,094	56,053	55,304
Dept. of Defense	8,640	8,753	9,220	8,951	8,834	8,317	8,586	7,921
Dept. of HHS, total	15,381	16,154	16,701	17,035	17,024	16,817	16,687	16,795
NIH	14,081	14,930	15,749	15,843	15,600	15,411	15,244	15,342
Other HHS	1,300	1,224	952	1,192	1,424	1,406	1,443	1,453
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,212	2,480	2,512
NSF	12,542	13,223	13,325	13,656	13,447	13,258	13,213	13,316
USDA	2,982	3,099	3,202	3,297	3,152	2,902	2,562	2,357
All other Federal	15,621	16,098	17,021	16,849	16,083	13,588	12,525	12,403
Institutional support	113,621	115,647	116,483	116,299	115,875	114,560	114,547	113,658
Other non-Federal support, total	25,185	25,717	24,615	24,990	23,535	22,904	22,671	23,764
All other U.S.	19,079	19,793	19,622	19,780	18,572	18,136	18,370	19,977
Foreign	6,106	5,924	4,993	5,210	4,963	4,768	4,301	3,787
Self-support	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799
Sciences, total:								
Total, all sources	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Federal, total	39,372	40,973	42,801	43,266	42,398	41,505	40,362	39,878
Dept. of Defense	3,808	3,843	4,143	4,303	4,101	3,857	3,856	3,633
Dept. of HHS, total	14,574	15,259	15,781	16,133	16,106	15,982	15,771	15,815
NIH	13,360	14,138	14,959	15,065	14,832	14,680	14,477	14,513
Other HHS	1,214	1,121	822	1,068	1,274	1,302	1,294	1,302
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,153	1,257	1,326
NSF	8,275	8,652	8,815	9,049	8,906	8,697	8,614	8,605
USDA	2,708	2,753	2,910	2,964	2,812	2,612	2,349	2,174
All other Federal	10,007	10,466	11,152	10,817	10,473	9,204	8,515	8,325
Institutional support	89,482	91,274	92,027	92,200	92,504	91,577	91,240	90,854
Other non-Federal support, total	14,671	15,281	14,969	15,706	14,512	14,100	13,775	14,027
All other U.S.	10,635	11,351	11,595	12,090	11,179	10,858	10,874	11,430
Foreign	4,036	3,930	3,374	3,616	3,333	3,242	2,901	2,597
Self-support	48,811	53,643	55,131	54,928	54,421	55,266	53,399	51,960
Physical sciences,:								
Total, all sources	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Federal, total	10,750	10,929	11,018	10,940	10,270	9,807	9,376	9,079
Dept. of Defense	1,225	1,190	1,184	1,313	1,195	1,069	1,031	991
Dept. of HHS, total	2,017	2,164	2,135	2,179	2,056	2,050	1,942	1,882
NIH	1,849	2,036	2,026	2,050	1,889	1,784	1,638	1,637
Other HHS	168	128	109	129	167	266	304	245
NASA ¹	N/A	N/A	N/A	N/A	N/A	523	569	576
NSF	3,561	3,594	3,607	3,689	3,574	3,371	3,374	3,324
USDA	60	66	60	42	38	43	30	19
All other Federal	3,887	3,915	4,032	3,717	3,407	2,751	2,430	2,287
Institutional support	14,683	15,015	14,831	14,448	14,440	13,970	13,796	13,627
Other non-Federal support, total	2,211	2,330	2,227	2,304	2,074	2,072	1,847	1,839
All other U.S.	1,912	2,025	1,949	1,998	1,787	1,793	1,633	1,650
Foreign	299	305	278	306	287	279	214	189
Self-support	1,809	1,800	1,870	1,669	1,449	1,468	1,249	1,183

See explanatory information, if any, and SOURCE at end of table.

Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Earth, atmospheric, & ocean sciences:								
Total, all sources	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Federal, total	3,092	3,403	3,623	3,577	3,441	3,253	3,082	2,937
Dept. of Defense	449	472	513	493	408	389	364	336
Dept. of HHS, total	56	49	48	37	33	49	40	40
NIH	23	43	41	36	30	30	27	23
Other HHS	33	6	7	1	3	19	13	17
NASA ¹	N/A	N/A	N/A	N/A	N/A	326	350	388
NSF	1,217	1,312	1,352	1,393	1,375	1,238	1,198	1,115
USDA	69	85	64	61	64	74	51	74
All other Federal	1,301	1,485	1,646	1,593	1,561	1,177	1,079	984
Institutional support	4,105	4,080	4,114	4,126	4,200	4,034	4,127	4,213
Other non-Federal support, total	960	989	921	1,014	958	885	872	841
All other U.S.	673	746	729	782	724	669	688	677
Foreign	287	243	192	232	234	216	184	164
Self-support	1,766	2,013	2,141	2,167	2,129	2,083	1,853	1,961
Mathematical sciences:								
Total, all sources	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Federal, total	1,471	1,460	1,436	1,372	1,264	1,228	1,140	1,036
Dept. of Defense	376	385	399	371	321	351	363	283
Dept. of HHS, total	69	118	80	76	87	82	96	102
NIH	64	111	74	68	63	61	66	70
Other HHS	5	7	6	8	24	21	30	32
NASA ¹	N/A	N/A	N/A	N/A	N/A	21	19	11
NSF	450	455	462	509	465	435	383	386
USDA	21	24	27	16	13	9	16	7
All other Federal	555	478	468	400	378	330	263	247
Institutional support	9,185	9,199	9,035	9,071	8,766	8,506	8,167	8,002
Other non-Federal support, total	579	617	505	537	477	545	477	435
All other U.S.	310	348	284	319	290	338	300	296
Foreign	269	269	221	218	187	207	177	139
Self-support	2,392	2,740	2,868	2,519	2,236	2,045	1,745	1,653
Computer sciences:								
Total, all sources	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Federal, total	2,501	2,595	2,883	3,007	3,109	3,074	3,117	3,259
Dept. of Defense	1,125	1,171	1,314	1,311	1,390	1,335	1,414	1,286
Dept. of HHS, total	71	100	103	97	110	113	106	123
NIH	65	97	95	89	92	80	78	88
Other HHS	6	3	8	8	18	33	28	35
NASA ¹	N/A	N/A	N/A	N/A	N/A	119	114	118
NSF	896	958	1,003	1,040	1,050	1,044	1,076	1,164
USDA	8	6	7	9	13	13	12	10
All other Federal	401	360	456	550	546	450	395	558
Institutional support	5,110	5,262	5,182	5,111	5,172	5,320	5,556	5,755
Other non-Federal support, total	1,276	1,306	1,342	1,342	1,249	1,093	1,129	1,169
All other U.S.	957	990	1,090	1,066	1,024	852	974	1,004
Foreign	319	316	252	276	225	241	155	165
Self-support	5,983	6,606	6,420	5,929	5,686	6,146	6,700	7,287
Agricultural sciences:								
Total, all sources	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Federal, total	1,830	1,942	1,946	1,906	2,011	1,927	1,741	1,623
Dept. of Defense	26	18	37	35	32	38	39	51
Dept. of HHS, total	45	41	34	48	23	31	29	28
NIH	37	38	32	45	17	17	21	13
Other HHS	8	3	2	3	6	14	8	15
NASA ¹	N/A	N/A	N/A	N/A	N/A	22	20	26
NSF	61	76	76	87	88	95	100	92
USDA	1,098	1,093	1,140	1,108	1,172	1,040	937	924
All other Federal	600	714	659	628	696	701	616	502
Institutional support	3,442	3,516	3,541	3,722	3,758	3,582	3,553	3,633
Other non-Federal support, total	1,712	1,683	1,666	1,653	1,461	1,432	1,544	1,559
All other U.S.	1,056	1,097	1,176	1,137	1,062	1,082	1,208	1,268
Foreign	656	586	490	516	399	350	336	291
Self-support	1,889	1,968	1,949	1,851	1,926	1,941	1,839	1,714

See explanatory information, if any, and SOURCE at end of table.

Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Biological sciences:								
Total, all sources	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Federal, total	14,372	15,002	16,048	16,583	16,492	16,435	16,175	16,031
Dept. of Defense	220	229	269	346	354	358	359	344
Dept. of HHS, total	10,616	10,989	11,554	11,927	12,004	11,819	11,781	11,815
NIH	10,164	10,575	11,236	11,412	11,332	11,230	11,197	11,200
Other HHS	452	414	318	515	672	589	584	615
NASA ¹	N/A	N/A	N/A	N/A	N/A	85	108	102
NSF	1,269	1,333	1,362	1,369	1,399	1,484	1,518	1,526
USDA	1,060	1,078	1,215	1,280	1,078	1,065	923	802
All other Federal	1,207	1,373	1,648	1,661	1,657	1,624	1,486	1,442
Institutional support	18,584	19,046	19,265	19,895	19,987	19,553	19,441	19,396
Other non-Federal support, total	3,703	3,758	3,836	4,116	3,873	3,713	3,524	3,702
All other U.S.	2,989	3,082	3,255	3,483	3,267	3,156	3,006	3,174
Foreign	714	676	581	633	606	557	518	528
Self-support	4,623	5,026	5,510	5,616	6,083	6,136	5,923	5,925
Psychology:								
Total, all sources	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Federal, total	2,379	2,457	2,565	2,528	2,467	2,662	2,648	2,888
Dept. of Defense	146	135	163	172	174	136	110	128
Dept. of HHS, total	1,332	1,378	1,412	1,347	1,320	1,512	1,447	1,476
NIH	891	942	1,153	1,080	1,089	1,213	1,188	1,221
Other HHS	441	436	259	267	231	299	259	255
NASA ¹	N/A	N/A	N/A	N/A	N/A	7	12	14
NSF	267	281	308	287	286	287	278	279
USDA	24	19	15	27	16	5	7	8
All other Federal	610	644	667	695	671	715	794	983
Institutional support	11,184	11,399	12,066	11,863	11,780	11,891	12,217	11,875
Other non-Federal support, total	1,026	1,083	1,031	1,142	1,072	955	1,185	1,314
All other U.S.	972	1,026	984	1,069	1,029	916	1,128	1,262
Foreign	54	57	47	73	43	39	57	52
Self-support	12,226	13,094	12,916	13,302	13,409	13,480	13,144	12,955
Social sciences:								
Total, all sources	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Federal, total	2,977	3,185	3,282	3,353	3,344	3,119	3,083	3,025
Dept. of Defense	241	243	264	262	227	181	176	214
Dept. of HHS, total	368	420	415	422	473	326	330	349
NIH	267	296	302	285	320	265	262	261
Other HHS	101	124	113	137	153	61	68	88
NASA ¹	N/A	N/A	N/A	N/A	N/A	50	65	91
NSF	554	643	645	675	669	743	687	719
USDA	368	382	382	421	418	363	373	330
All other Federal	1,446	1,497	1,576	1,573	1,557	1,456	1,452	1,322
Institutional support	23,189	23,757	23,993	23,964	24,401	24,721	24,383	24,353
Other non-Federal support, total	3,204	3,515	3,441	3,598	3,348	3,405	3,197	3,168
All other U.S.	1,766	2,037	2,128	2,236	1,996	2,052	1,937	2,099
Foreign	1,438	1,478	1,313	1,362	1,352	1,353	1,260	1,069
Self-support	18,123	20,396	21,457	21,875	21,503	21,967	20,946	19,282
Engineering, total:								
Total, all sources	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Federal, total	15,794	16,354	16,668	16,522	16,142	15,589	15,691	15,426
Dept. of Defense	4,832	4,910	5,077	4,648	4,733	4,460	4,730	4,288
Dept. of HHS, total	807	895	920	902	918	835	916	980
NIH	721	792	790	778	768	731	767	829
Other HHS	86	103	130	124	150	104	149	151
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,059	1,223	1,186
NSF	4,267	4,571	4,510	4,607	4,541	4,561	4,599	4,711
USDA	274	346	292	333	340	290	213	183
All other Federal	5,614	5,632	5,869	6,032	5,610	4,384	4,010	4,078
Institutional support	24,139	24,373	24,456	24,099	23,371	22,983	23,307	22,804
Other non-Federal support, total	10,514	10,436	9,646	9,284	9,023	8,804	8,896	9,737
All other U.S.	8,444	8,442	8,027	7,690	7,393	7,278	7,496	8,547
Foreign	2,070	1,994	1,619	1,594	1,630	1,526	1,400	1,190
Self-support	18,633	21,074	20,911	19,607	17,299	16,698	15,941	15,839

See explanatory information, if any, and SOURCE at end of table.

Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Chemical engineering:								
Total, all sources	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Federal, total	1,592	1,643	1,735	1,706	1,740	1,769	1,627	1,682
Dept. of Defense	134	123	138	128	164	166	160	153
Dept. of HHS, total	132	166	141	173	163	162	137	149
NIH	128	146	119	143	136	148	121	119
Other HHS	4	20	22	30	27	14	16	30
NASA ¹	N/A	N/A	N/A	N/A	N/A	89	77	97
NSF	663	696	726	747	759	776	706	759
USDA	16	38	52	54	66	34	25	25
All other Federal	647	620	678	604	588	542	522	499
Institutional support	2,262	2,286	2,328	2,394	2,257	2,141	2,198	2,086
Other non-Federal support, total	1,222	1,164	1,057	1,143	1,071	1,105	1,127	937
All other U.S.	1,106	1,068	958	1,039	936	949	947	825
Foreign	116	96	99	104	135	156	180	112
Self-support	677	807	882	811	837	841	761	842
Civil engineering:								
Total, all sources	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Federal, total	1,732	1,996	1,943	2,019	1,917	1,843	1,781	1,669
Dept. of Defense	273	349	322	315	271	196	223	184
Dept. of HHS, total	32	41	38	45	41	39	47	58
NIH	28	36	30	37	31	33	41	47
Other HHS	4	5	8	8	10	6	6	11
NASA ¹	N/A	N/A	N/A	N/A	N/A	117	121	60
NSF	496	531	513	553	528	534	529	544
USDA	51	68	51	53	53	70	40	28
All other Federal	880	1,007	1,019	1,053	1,024	887	821	795
Institutional support	4,131	4,329	4,497	4,671	4,780	4,674	4,631	4,494
Other non-Federal support, total	1,323	1,436	1,244	1,219	1,148	1,144	1,061	1,083
All other U.S.	912	1,019	971	938	869	901	841	904
Foreign	411	417	273	281	279	243	220	179
Self-support	3,806	4,255	4,298	4,266	3,936	3,720	3,427	3,423
Electrical engineering:								
Total, all sources	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Federal, total	3,791	3,986	4,033	3,974	4,004	3,927	4,371	4,317
Dept. of Defense	1,623	1,680	1,734	1,649	1,699	1,647	1,962	1,832
Dept. of HHS, total	85	90	103	100	113	93	118	132
NIH	76	81	86	83	84	71	71	104
Other HHS	9	9	17	17	29	22	47	28
NASA ¹	N/A	N/A	N/A	N/A	N/A	162	214	224
NSF	1,253	1,360	1,260	1,266	1,298	1,298	1,346	1,304
USDA	18	24	9	24	33	12	14	12
All other Federal	812	832	927	935	861	715	717	813
Institutional support	6,462	6,663	6,544	6,237	6,086	6,271	6,568	6,361
Other non-Federal support, total	2,980	2,926	2,746	2,578	2,564	2,630	2,720	3,145
All other U.S.	2,450	2,423	2,311	2,178	2,146	2,251	2,384	2,847
Foreign	530	503	435	400	418	379	336	298
Self-support	5,980	6,673	6,359	5,943	4,922	4,568	4,652	5,228
Industrial engineering:								
Total, all sources	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Federal, total	680	634	625	607	626	625	588	581
Dept. of Defense	279	264	244	168	167	208	193	170
Dept. of HHS, total	52	53	78	50	54	49	36	44
NIH	16	22	36	28	27	27	30	38
Other HHS	36	31	42	22	27	22	6	6
NASA ¹	N/A	N/A	N/A	N/A	N/A	24	21	24
NSF	187	165	171	203	172	169	143	176
USDA	5	5	3	1	0	1	1	4
All other Federal	157	147	129	185	233	174	194	163
Institutional support	1,826	1,826	1,915	1,851	1,802	1,753	1,672	1,694
Other non-Federal support, total	490	564	487	548	491	454	503	552
All other U.S.	361	427	398	455	413	348	406	454
Foreign	129	137	89	93	78	106	97	98
Self-support	2,401	2,819	2,655	2,679	2,185	2,128	2,151	1,941

See explanatory information, if any, and SOURCE at end of table.

Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998

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Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Mechanical engineering:								
Total, all sources	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Federal, total	2,697	2,753	2,952	2,885	2,726	2,546	2,573	2,555
Dept. of Defense	724	715	777	763	801	709	734	695
Dept. of HHS, total	71	87	86	79	93	76	109	112
NIH	58	77	70	70	82	63	70	79
Other HHS	13	10	16	9	11	13	39	33
NASA ¹	N/A	N/A	N/A	N/A	N/A	201	282	276
NSF	732	786	805	779	734	764	837	901
USDA	29	26	9	10	4	13	12	5
All other Federal	1,141	1,139	1,275	1,254	1,094	783	599	566
Institutional support	4,219	4,317	4,150	4,024	3,832	3,869	3,825	3,743
Other non-Federal support, total	1,666	1,599	1,550	1,552	1,588	1,441	1,441	1,592
All other U.S.	1,395	1,382	1,381	1,313	1,335	1,237	1,273	1,449
Foreign	271	217	169	239	253	204	168	143
Self-support	2,833	3,410	3,476	3,181	2,787	2,581	2,335	1,929
Other engineering:								
Total, all sources	16,310	16,151	16,205	15,224	14,536	14,044	13,823	13,952
Federal, total	5,302	5,342	5,380	5,331	5,129	4,879	4,751	4,622
Dept. of Defense	1,799	1,779	1,862	1,625	1,631	1,534	1,458	1,254
Dept. of HHS, total	435	458	474	455	454	416	469	485
NIH	415	430	449	417	408	389	434	442
Other HHS	20	28	25	38	46	27	35	43
NASA ¹	N/A	N/A	N/A	N/A	N/A	466	508	505
NSF	936	1,033	1,035	1,059	1,050	1,020	1,038	1,027
USDA	155	185	168	191	184	160	121	109
All other Federal	1,977	1,887	1,841	2,001	1,810	1,283	1,157	1,242
Institutional support	5,239	4,952	5,022	4,922	4,614	4,275	4,413	4,426
Other non-Federal support, total	2,833	2,747	2,562	2,244	2,161	2,030	2,044	2,428
All other U.S.	2,220	2,123	2,008	1,767	1,694	1,592	1,645	2,068
Foreign	613	624	554	477	467	438	399	360
Self-support	2,936	3,110	3,241	2,727	2,632	2,860	2,615	2,476
Total, health fields:								
Total, all sources	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Federal, total	6,542	6,953	6,911	7,215	7,356	6,935	7,224	7,513
Dept. of Defense	403	381	421	364	326	308	308	297
Dept. of HHS, total	4,761	4,971	4,962	5,163	5,275	5,112	5,309	5,590
NIH	1,841	2,050	2,220	2,282	2,378	2,426	2,720	2,839
Other HHS	2,920	2,921	2,742	2,881	2,897	2,686	2,589	2,751
NASA ¹	N/A	N/A	N/A	N/A	N/A	14	21	26
NSF	56	70	85	108	91	81	100	134
USDA	60	69	69	67	48	44	34	38
All other Federal	1,262	1,462	1,374	1,513	1,616	1,376	1,452	1,428
Institutional support	6,951	7,082	7,511	7,864	8,311	8,383	8,825	9,132
Other non-Federal support, total	1,505	1,673	1,708	1,821	1,929	1,957	1,892	2,051
All other U.S.	1,047	1,217	1,270	1,367	1,410	1,530	1,406	1,640
Foreign	458	456	438	454	519	427	486	411
Self-support	11,836	13,110	15,456	17,305	18,859	20,923	21,786	22,323

¹ Data for NASA were not collected separately prior to 1996.

KEY: N/A = Not applicable

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 40. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary mechanism of support: 1991-1998

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Field and mechanism of support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields:								
Total, all types	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Fellowships	26,245	28,126	28,623	28,412	28,371	28,296	28,350	28,526
Traineeships	14,842	14,836	14,879	14,986	15,289	14,813	13,723	14,306
Research assistantships	83,366	86,206	88,135	89,681	87,662	85,460	85,619	85,827
Teaching assistantships	62,948	63,534	65,207	64,724	63,907	63,730	63,342	62,884
Other types of support	100,849	109,524	111,351	112,014	110,896	112,421	111,304	110,001
Total, science and engineering:								
Total, all types	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Fellowships	24,575	26,293	26,679	26,337	26,234	25,899	25,964	26,098
Traineeships	10,287	9,852	10,082	10,137	10,429	10,197	9,464	9,657
Research assistantships	79,581	82,428	84,384	85,555	83,422	81,360	81,014	81,051
Teaching assistantships	60,583	61,154	62,842	62,068	61,186	60,836	60,353	59,882
Other types of support	86,390	93,681	92,622	91,515	88,399	88,230	85,816	83,837
Sciences, total:								
Total, all types	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Fellowships	18,887	20,259	20,592	20,420	20,336	20,302	20,273	20,605
Traineeships	9,197	8,865	9,054	9,224	9,430	9,335	8,600	8,812
Research assistantships	53,054	55,133	56,694	57,822	56,644	55,134	54,375	53,926
Teaching assistantships	49,631	50,563	51,936	51,567	51,236	51,021	50,396	49,997
Other types of support	61,567	66,351	66,652	67,067	66,189	66,656	65,132	63,379
Physical sciences,:								
Total, all types	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Fellowships	2,625	2,804	2,678	2,390	2,304	2,156	2,091	2,080
Traineeships	784	694	742	664	672	630	517	479
Research assistantships	12,094	12,328	12,160	12,224	11,714	11,400	11,167	10,937
Teaching assistantships	11,445	11,642	11,931	11,663	11,436	10,999	10,688	10,540
Other types of support	2,505	2,606	2,435	2,420	2,107	2,132	1,805	1,692
Earth, atmospheric, & ocean sciences:								
Total, all types	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Fellowships	885	888	898	864	883	866	810	920
Traineeships	93	120	153	138	131	131	89	113
Research assistantships	4,266	4,488	4,615	4,712	4,526	4,201	4,145	3,985
Teaching assistantships	2,257	2,337	2,405	2,391	2,413	2,394	2,511	2,445
Other types of support	2,422	2,652	2,728	2,779	2,775	2,663	2,379	2,489
Mathematical sciences:								
Total, all types	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Fellowships	1,350	1,394	1,350	1,203	1,291	1,274	1,194	1,096
Traineeships	207	220	258	244	216	177	176	153
Research assistantships	1,293	1,330	1,349	1,460	1,367	1,231	1,311	1,132
Teaching assistantships	7,507	7,463	7,308	7,318	7,004	6,881	6,482	6,373
Other types of support	3,270	3,609	3,579	3,274	2,865	2,761	2,366	2,372
Computer sciences:								
Total, all types	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Fellowships	868	838	799	888	893	888	892	953
Traineeships	130	142	210	239	213	187	196	210
Research assistantships	3,430	3,556	3,645	3,737	3,778	3,841	3,907	4,157
Teaching assistantships	3,364	3,409	3,463	3,273	3,274	3,277	3,534	3,650
Other types of support	7,078	7,824	7,710	7,252	7,058	7,440	7,973	8,500
Agricultural sciences:								
Total, all types	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Fellowships	456	472	522	513	449	424	427	431
Traineeships	105	110	153	116	124	121	113	98
Research assistantships	4,939	5,126	5,191	5,342	5,297	5,105	5,021	4,899
Teaching assistantships	749	774	867	872	924	928	924	990
Other types of support	2,624	2,627	2,369	2,289	2,362	2,304	2,192	2,111
Biological sciences:								
Total, all types	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Fellowships	4,608	4,983	5,165	5,459	5,299	5,194	5,412	5,603
Traineeships	5,078	4,806	4,878	5,202	5,283	5,336	5,017	5,201
Research assistantships	16,641	17,398	18,584	19,144	18,963	18,376	18,227	17,924
Teaching assistantships	8,339	8,492	8,696	8,884	8,813	8,864	8,665	8,574
Other types of support	6,616	7,153	7,336	7,521	8,077	8,067	7,742	7,752
Psychology:								
Total, all types	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Fellowships	1,644	1,807	1,883	1,807	1,790	1,905	2,062	2,265
Traineeships	1,125	1,112	1,064	992	1,060	1,114	994	1,020
Research assistantships	3,877	3,906	4,148	4,193	4,169	4,255	4,232	4,300
Teaching assistantships	5,327	5,435	5,911	5,696	5,766	5,827	5,821	5,624
Other types of support	14,842	15,773	15,572	16,147	15,943	15,887	16,085	15,823

See explanatory information, if any, and SOURCE at end of table.

Table 40. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary mechanism of support: 1991-1998

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Field and mechanism of support	1991	1992	1993	1994	1995	1996	1997	1998
Social sciences:								
Total, all types	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Fellowships	6,451	7,073	7,297	7,296	7,427	7,595	7,385	7,257
Traineeships	1,675	1,661	1,596	1,629	1,731	1,639	1,498	1,538
Research assistantships	6,514	7,001	7,002	7,010	6,830	6,725	6,365	6,592
Teaching assistantships	10,643	11,011	11,355	11,470	11,606	11,851	11,771	11,801
Other types of support	22,210	24,107	24,923	25,385	25,002	25,402	24,590	22,640
Engineering, total:								
Total, all types	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Fellowships	5,688	6,034	6,087	5,917	5,898	5,597	5,691	5,493
Traineeships	1,090	987	1,028	913	999	862	864	845
Research assistantships	26,527	27,295	27,690	27,733	26,778	26,226	26,639	27,125
Teaching assistantships	10,952	10,591	10,906	10,501	9,950	9,815	9,957	9,885
Other types of support	24,823	27,330	25,970	24,448	22,210	21,574	20,684	20,458
Chemical engineering:								
Total, all types	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Fellowships	684	733	718	701	776	752	817	699
Traineeships	173	153	123	98	105	93	94	97
Research assistantships	2,978	3,003	3,104	3,258	3,091	3,031	2,946	2,880
Teaching assistantships	993	1,002	1,014	935	906	916	913	883
Other types of support	925	1,009	1,043	1,062	1,027	1,064	943	988
Civil engineering:								
Total, all types	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Fellowships	674	795	883	860	884	862	833	790
Traineeships	209	213	205	187	187	174	176	158
Research assistantships	3,538	3,914	4,008	4,187	4,180	4,086	3,935	3,820
Teaching assistantships	1,617	1,599	1,781	1,859	1,806	1,758	1,747	1,739
Other types of support	4,954	5,495	5,105	5,082	4,724	4,501	4,209	4,162
Electrical engineering:								
Total, all types	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Fellowships	1,392	1,466	1,425	1,456	1,413	1,376	1,373	1,309
Traineeships	182	159	169	145	155	152	122	133
Research assistantships	6,446	6,764	6,860	6,729	6,627	6,841	7,463	7,638
Teaching assistantships	3,363	3,323	3,306	3,128	3,031	3,113	3,274	3,264
Other types of support	7,830	8,536	7,922	7,274	6,350	5,914	6,079	6,707
Industrial engineering:								
Total, all types	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Fellowships	258	264	278	270	298	232	236	251
Traineeships	31	27	47	32	37	14	21	24
Research assistantships	1,222	1,202	1,236	1,293	1,285	1,251	1,236	1,369
Teaching assistantships	874	865	923	917	813	770	766	769
Other types of support	3,012	3,485	3,198	3,173	2,671	2,693	2,655	2,355
Mechanical engineering:								
Total, all types	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Fellowships	859	897	901	920	923	892	830	891
Traineeships	173	162	210	187	187	165	215	180
Research assistantships	4,604	4,701	4,726	4,623	4,352	4,201	4,270	4,414
Teaching assistantships	2,150	2,132	2,217	2,019	1,882	1,805	1,832	1,727
Other types of support	3,629	4,187	4,074	3,893	3,589	3,374	3,027	2,607
Other engineering:								
Total, all types	16,310	16,151	16,205	15,224	14,536	14,044	13,823	13,952
Fellowships	1,821	1,879	1,882	1,710	1,604	1,483	1,602	1,553
Traineeships	322	273	274	264	328	264	236	253
Research assistantships	7,739	7,711	7,756	7,643	7,243	6,816	6,789	7,004
Teaching assistantships	1,955	1,670	1,665	1,643	1,512	1,453	1,425	1,503
Other types of support	4,473	4,618	4,628	3,964	3,849	4,028	3,771	3,639
Total, health fields:								
Total, all types	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Fellowships	1,670	1,833	1,944	2,075	2,137	2,397	2,386	2,428
Traineeships	4,555	4,984	4,797	4,849	4,860	4,616	4,259	4,649
Research assistantships	3,785	3,778	3,751	4,126	4,240	4,100	4,605	4,776
Teaching assistantships	2,365	2,380	2,365	2,656	2,721	2,894	2,989	3,002
Other types of support	14,459	15,843	18,729	20,499	22,497	24,191	25,488	26,164

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 41. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field and primary mechanism of support: 1998

Field	Total	Fellowships	Trainee-ships	Research assistantships	Teaching assistantships	Other types of support
Total, all surveyed fields	301,544	28,526	14,306	85,827	62,884	110,001
Total, science and engineering fields	260,525	26,098	9,657	81,051	59,882	83,837
Sciences, total	196,719	20,605	8,812	53,926	49,997	63,379
Physical sciences, total	25,728	2,080	479	10,937	10,540	1,692
Astronomy	787	134	20	373	225	35
Chemistry	15,281	1,126	321	6,313	6,686	835
Physics	9,539	815	138	4,209	3,619	758
Physical sciences, n.e.c.	121	5	0	42	10	64
Earth, atmos., & ocean sci., total	9,952	920	113	3,985	2,445	2,489
Atmospheric sciences	854	48	1	575	110	120
Geosciences	5,045	509	72	1,706	1,762	996
Oceanography	2,005	233	13	1,137	201	421
Earth, atmos., & ocean sci., n.e.c.	2,048	130	27	567	372	952
Mathematical sciences	11,126	1,096	153	1,132	6,373	2,372
Computer sciences	17,470	953	210	4,157	3,650	8,500
Agricultural sciences	8,529	431	98	4,899	990	2,111
Biological sciences, total	45,054	5,603	5,201	17,924	8,574	7,752
Anatomy	961	175	110	330	121	225
Biochemistry	4,837	681	626	2,545	578	407
Biology	8,554	916	445	2,137	3,522	1,534
Biometry/epidemiology	2,559	283	327	586	133	1,230
Biophysics	707	156	133	308	41	69
Botany	1,989	163	41	982	584	219
Cell biology	3,728	604	809	1,729	397	189
Ecology	1,207	197	34	396	441	139
Entomology/parasitology	1,000	56	16	664	147	117
Genetics	1,579	222	332	723	93	209
Microbio., immunology, & virology	4,403	667	660	2,004	564	508
Nutrition	2,975	147	106	1,256	425	1,041
Pathology	1,327	217	177	514	56	363
Pharmacology	2,533	377	615	1,112	206	223
Physiology	1,990	212	255	730	178	615
Zoology	1,418	134	37	387	735	125
Biosciences, n.e.c.	3,287	396	478	1,521	353	539
Psychology	29,032	2,265	1,020	4,300	5,624	15,823
Social sciences, total	49,828	7,257	1,538	6,592	11,801	22,640
Agricultural economics	1,650	108	15	892	188	447
Anthropology (cultural & social)	5,549	1,177	77	514	1,351	2,430
Economics (except agricultural)	8,317	1,386	221	1,013	2,634	3,063
Geography	2,667	165	36	583	959	924
Linguistics	2,144	353	67	197	671	856
Political science	14,736	2,353	758	1,309	2,751	7,565
Sociology	5,972	855	214	903	2,066	1,934
Sociology/anthropology	608	24	0	125	174	285
Social sciences, other	8,185	836	150	1,056	1,007	5,136
Engineering, total	63,806	5,493	845	27,125	9,885	20,458
Aerospace engineering	2,544	249	16	1,229	311	739
Agricultural engineering	756	71	5	414	80	186
Biomedical engineering	2,475	452	144	1,013	265	601
Chemical engineering	5,547	699	97	2,880	883	988
Civil engineering	10,669	790	158	3,820	1,739	4,162
Electrical engineering	19,051	1,309	133	7,638	3,264	6,707
Engineering science	1,111	150	8	522	146	285
Industrial/manufacturing eng.	4,768	251	24	1,369	769	2,355
Mechanical engineering	9,819	891	180	4,414	1,727	2,607
Metallurgical/materials eng.	3,677	262	47	2,460	366	542
Nuclear engineering	662	84	29	396	65	88
Engineering, other	2,727	285	4	970	270	1,198
Total, health fields	41,019	2,428	4,649	4,776	3,002	26,164
Clinical fields	2,474	217	536	414	88	1,219
Dental sciences	1,283	100	81	92	261	749
Nursing	7,309	354	1,977	421	359	4,198
Pharmaceutical sciences	2,214	243	61	777	708	425
Preventive medicine/community health	6,376	367	604	728	170	4,507
Speech pathology/audiology	7,498	265	490	697	712	5,334
Veterinary sciences	958	32	29	403	42	452
Other health fields	12,907	850	871	1,244	662	9,280

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 42. Full-time graduate students in science and engineering fields in doctorate-granting institutions, by primary mechanism and primary source of support: 1991-1998

Page 1 of 2

Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Total, all types:								
Total, all sources	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Federal, total	55,166	57,327	59,469	59,788	58,540	57,094	56,053	55,304
Dept. of Defense	8,640	8,753	9,220	8,951	8,834	8,317	8,586	7,921
Dept. of HHS, total	15,381	16,154	16,701	17,035	17,024	16,817	16,687	16,795
NIH	14,081	14,930	15,749	15,843	15,600	15,411	15,244	15,342
Other HHS	1,300	1,224	952	1,192	1,424	1,406	1,443	1,453
NASA ¹	N/A	N/A	N/A	N/A	N/A	2,212	2,480	2,512
NSF	12,542	13,223	13,325	13,656	13,447	13,258	13,213	13,316
USDA	2,982	3,099	3,202	3,297	3,152	2,902	2,562	2,357
All other Federal	15,621	16,098	17,021	16,849	16,083	13,588	12,525	12,403
Institutional support	113,621	115,647	116,483	116,299	115,875	114,560	114,547	113,658
Other non-Federal support, total	25,185	25,717	24,615	24,990	23,535	22,904	22,671	23,764
All other U.S.	19,079	19,793	19,622	19,780	18,572	18,136	18,370	19,977
Foreign	6,106	5,924	4,993	5,210	4,963	4,768	4,301	3,787
Self-support	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799
Fellowships:								
Total, all sources	24,575	26,293	26,679	26,337	26,234	25,899	25,964	26,098
Federal, total	6,782	7,102	6,870	6,250	6,226	6,304	6,143	6,242
Dept. of Defense	673	645	622	523	469	506	507	519
Dept. of HHS, total	807	979	1,017	1,040	1,155	1,133	1,217	1,277
NIH	711	863	903	909	954	954	991	1,049
Other HHS	96	116	114	131	201	179	226	228
NASA ¹	N/A	N/A	N/A	N/A	N/A	398	349	362
NSF	2,218	2,339	2,256	2,263	2,305	2,439	2,299	2,327
USDA	102	110	110	106	116	101	123	116
All other Federal	2,982	3,029	2,865	2,318	2,181	1,727	1,648	1,641
Institutional support	12,081	13,129	13,711	13,663	14,020	14,097	14,898	14,896
Other non-Federal support, total	5,712	6,062	6,098	6,424	5,988	5,498	4,923	4,960
All other U.S.	3,511	3,764	3,652	4,019	3,764	3,362	3,082	3,260
Foreign	2,201	2,298	2,446	2,405	2,224	2,136	1,841	1,700
Self-support	N/A							
Traineeships:								
Total, all sources	10,287	9,852	10,082	10,137	10,429	10,197	9,464	9,657
Federal, total	5,400	5,472	5,678	5,774	5,596	5,484	5,108	5,385
Dept. of Defense	112	86	91	109	104	124	108	64
Dept. of HHS, total	4,372	4,362	4,344	4,465	4,335	4,250	3,957	4,214
NIH	4,072	4,081	4,160	4,178	3,978	3,984	3,773	4,036
Other HHS	300	281	184	287	357	266	184	178
NASA ¹	N/A	N/A	N/A	N/A	N/A	65	76	58
NSF	80	104	161	256	333	428	379	407
USDA	33	28	42	36	17	24	23	14
All other Federal	803	892	1,040	908	807	593	565	628
Institutional support	4,191	3,608	3,540	3,497	4,154	4,157	3,753	3,579
Other non-Federal support, total	696	772	864	866	679	556	603	693
All other U.S.	511	565	575	646	484	374	454	560
Foreign	185	207	289	220	195	182	149	133
Self-support	N/A							
Research assistantships:								
Total, all sources	79,581	82,428	84,384	85,555	83,422	81,360	81,014	81,051
Federal, total	38,970	40,686	42,628	43,378	42,528	41,406	41,070	39,564
Dept. of Defense	5,414	5,667	6,158	6,121	6,177	5,887	6,261	5,731
Dept. of HHS, total	9,892	10,404	10,920	11,177	11,129	10,985	11,035	10,554
NIH	9,033	9,633	10,330	10,462	10,333	10,110	10,087	9,573
Other HHS	859	771	590	715	796	875	948	981
NASA ¹	N/A	N/A	N/A	N/A	N/A	1,706	2,002	2,035
NSF	10,103	10,573	10,676	10,952	10,518	10,169	10,362	10,316
USDA	2,730	2,857	2,930	3,035	2,920	2,677	2,344	2,136
All other Federal	10,831	11,185	11,944	12,093	11,784	9,982	9,066	8,792
Institutional support	28,245	28,807	28,553	29,190	28,710	27,776	27,433	28,295
Other non-Federal support, total	12,366	12,935	13,203	12,987	12,184	12,178	12,511	13,192
All other U.S.	11,563	12,125	12,347	12,224	11,448	11,453	11,771	12,566
Foreign	803	810	856	763	736	725	740	626
Self-support	N/A							

See explanatory information, if any, and SOURCE at end of table.

Table 42. Full-time graduate students in science and engineering fields in doctorate-granting institutions, by primary mechanism and primary source of support: 1991-1998

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Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
Teaching assistantships:								
Total, all sources	60,583	61,154	62,842	62,068	61,186	60,836	60,353	59,882
Federal, total	390	547	741	627	624	720	726	906
Dept. of Defense	N/A							
Dept. of HHS, total	85	164	159	130	111	180	156	228
NIH	72	147	154	121	104	176	126	221
Other HHS	13	17	5	9	7	4	30	7
NASA ¹	N/A	N/A	N/A	N/A	N/A	2	21	23
NSF	64	111	136	98	151	117	80	130
USDA	33	22	39	43	37	41	30	36
All other Federal	208	250	407	356	325	380	439	489
Institutional support	59,704	60,079	61,535	60,869	60,043	59,510	59,084	58,414
Other non-Federal support, total	489	528	566	572	519	606	543	562
All other U.S.	489	528	566	572	519	606	543	562
Foreign	N/A							
Self-support	N/A							
Other types of support:								
Total, all sources	86,390	93,681	92,622	91,515	88,399	88,230	85,816	83,837
Federal, total	3,624	3,520	3,552	3,759	3,566	3,180	3,006	3,207
Dept. of Defense	2,441	2,355	2,349	2,198	2,084	1,800	1,710	1,607
Dept. of HHS, total	225	245	261	223	294	269	322	522
NIH	193	206	202	173	231	187	267	463
Other HHS	32	39	59	50	63	82	55	59
NASA ¹	N/A	N/A	N/A	N/A	N/A	41	32	34
NSF	77	96	96	87	140	105	93	136
USDA	84	82	81	77	62	59	42	55
All other Federal	797	742	765	1,174	986	906	807	853
Institutional support	9,400	10,024	9,144	9,080	8,948	9,020	9,379	8,474
Other non-Federal support, total	5,922	5,420	3,884	4,141	4,165	4,066	4,091	4,357
All other U.S.	3,005	2,811	2,482	2,319	2,357	2,341	2,520	3,029
Foreign	2,917	2,609	1,402	1,822	1,808	1,725	1,571	1,328
Self-support	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799

¹ Data for NASA were not collected separately prior to 1996.

KEY: N/A = Not applicable

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 43. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by sex, primary source of support, and field: 1998

Page 1 of 2

Sex and source of support	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
Total										
Total, all sources	301,544	196,719	25,728	9,952	11,126	17,470	8,529	45,054	29,032	49,828
Federal, total	62,817	39,878	9,079	2,937	1,036	3,259	1,623	16,031	2,888	3,025
Dept. of Defense	8,218	3,633	991	336	283	1,286	51	344	128	214
Dept. of HHS, total	22,385	15,815	1,882	40	102	123	28	11,815	1,476	349
NIH	18,181	14,513	1,637	23	70	88	13	11,200	1,221	261
Other HHS	4,204	1,302	245	17	32	35	15	615	255	88
NASA	2,538	1,326	576	388	11	118	26	102	14	91
NSF	13,450	8,605	3,324	1,115	386	1,164	92	1,526	279	719
USDA	2,395	2,174	19	74	7	10	924	802	8	330
All other Federal	13,831	8,325	2,287	984	247	558	502	1,442	983	1,322
Institutional support	122,790	90,854	13,627	4,213	8,002	5,755	3,633	19,396	11,875	24,353
Other non-Federal, total	25,815	14,027	1,839	841	435	1,169	1,559	3,702	1,314	3,168
All other U.S.	21,617	11,430	1,650	677	296	1,004	1,268	3,174	1,262	2,099
Foreign	4,198	2,597	189	164	139	165	291	528	52	1,069
Self-support	90,122	51,960	1,183	1,961	1,653	7,287	1,714	5,925	12,955	19,282
Men										
Total, all sources	171,472	107,830	18,629	6,119	7,446	12,982	5,135	22,814	9,012	25,693
Federal, total	39,115	24,072	6,721	1,906	779	2,671	987	8,346	1,024	1,638
Dept. of Defense	6,780	2,858	809	246	249	1,097	29	190	72	166
Dept. of HHS, total	10,743	8,178	1,205	21	73	97	13	6,113	515	141
NIH	9,392	7,518	1,040	15	45	68	4	5,822	427	97
Other HHS	1,351	660	165	6	28	29	9	291	88	44
NASA	1,962	947	422	276	9	101	14	57	7	61
NSF	9,559	5,812	2,488	712	283	932	57	844	117	379
USDA	1,402	1,254	12	47	4	7	567	415	3	199
All other Federal	8,669	5,023	1,785	604	161	437	307	727	310	692
Institutional support	71,612	50,383	9,789	2,494	5,311	4,293	2,103	9,803	3,986	12,604
Other non-Federal, total	17,302	8,434	1,318	555	317	913	1,027	2,013	430	1,861
All other U.S.	14,242	6,606	1,167	433	209	779	812	1,697	410	1,099
Foreign	3,060	1,828	151	122	108	134	215	316	20	762
Self-support	43,443	24,941	801	1,164	1,039	5,105	1,018	2,652	3,572	9,590
Women										
Total, all sources	130,072	88,889	7,099	3,833	3,680	4,488	3,394	22,240	20,020	24,135
Federal, total	23,702	15,806	2,358	1,031	257	588	636	7,685	1,864	1,387
Dept. of Defense	1,438	775	182	90	34	189	22	154	56	48
Dept. of HHS, total	11,642	7,637	677	19	29	26	15	5,702	961	208
NIH	8,789	6,995	597	8	25	20	9	5,378	794	164
Other HHS	2,853	642	80	11	4	6	6	324	167	44
NASA	576	379	154	112	2	17	12	45	7	30
NSF	3,891	2,793	836	403	103	232	35	682	162	340
USDA	993	920	7	27	3	3	357	387	5	131
All other Federal	5,162	3,302	502	380	86	121	195	715	673	630
Institutional support	51,178	40,471	3,838	1,719	2,691	1,462	1,530	9,593	7,889	11,749
Other non-Federal, total	8,513	5,593	521	286	118	256	532	1,689	884	1,307
All other U.S.	7,375	4,824	483	244	87	225	456	1,477	852	1,000
Foreign	1,138	769	38	42	31	31	76	212	32	307
Self-support	46,679	27,019	382	797	614	2,182	696	3,273	9,383	9,692

See explanatory information, if any, and SOURCE at end of table.

Table 43. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by sex, primary source of support, and field: 1998

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Sex and source of support	Engineering									Health fields
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
Total										
Total, all sources	63,806	2,544	5,547	10,669	19,051	4,768	9,819	3,677	7,731	41,019
Federal, total	15,426	1,115	1,682	1,669	4,317	581	2,555	1,429	2,078	7,513
Dept. of Defense	4,288	460	153	184	1,832	170	695	342	452	297
Dept. of HHS, total	980	9	149	58	132	44	112	15	461	5,590
NIH	829	7	119	47	104	38	79	7	428	2,839
Other HHS	151	2	30	11	28	6	33	8	33	2,751
NASA	1,186	349	97	60	224	24	276	83	73	26
NSF	4,711	115	759	544	1,304	176	901	495	417	134
USDA	183	0	25	28	12	4	5	5	104	38
All other Federal	4,078	182	499	795	813	163	566	489	571	1,428
Institutional support	22,804	665	2,086	4,494	6,361	1,694	3,743	1,115	2,646	9,132
Other non-Federal, total	9,737	343	937	1,083	3,145	552	1,592	731	1,354	2,051
All other U.S.	8,547	286	825	904	2,847	454	1,449	651	1,131	1,640
Foreign	1,190	57	112	179	298	98	143	80	223	411
Self-support	15,839	421	842	3,423	5,228	1,941	1,929	402	1,653	22,323
Men										
Total, all sources	51,324	2,237	4,170	7,839	16,059	3,727	8,625	2,795	5,872	12,318
Federal, total	12,582	1,001	1,229	1,202	3,704	464	2,226	1,123	1,633	2,461
Dept. of Defense	3,785	435	131	152	1,618	147	623	274	405	137
Dept. of HHS, total	719	6	97	36	108	37	95	10	330	1,846
NIH	611	5	77	27	86	32	70	5	309	1,263
Other HHS	108	1	20	9	22	5	25	5	21	583
NASA	992	309	65	42	191	18	247	61	59	23
NSF	3,690	99	545	377	1,077	130	774	375	313	57
USDA	130	0	15	18	11	4	5	3	74	18
All other Federal	3,266	152	376	577	699	128	482	400	452	380
Institutional support	18,133	566	1,583	3,255	5,377	1,295	3,286	809	1,962	3,096
Other non-Federal, total	7,995	314	712	844	2,663	439	1,404	557	1,062	873
All other U.S.	6,970	260	627	693	2,398	358	1,274	491	869	666
Foreign	1,025	54	85	151	265	81	130	66	193	207
Self-support	12,614	356	646	2,538	4,315	1,529	1,709	306	1,215	5,888
Women										
Total, all sources	12,482	307	1,377	2,830	2,992	1,041	1,194	882	1,859	28,701
Federal, total	2,844	114	453	467	613	117	329	306	445	5,052
Dept. of Defense	503	25	22	32	214	23	72	68	47	160
Dept. of HHS, total	261	3	52	22	24	7	17	5	131	3,744
NIH	218	2	42	20	18	6	9	2	119	1,576
Other HHS	43	1	10	2	6	1	8	3	12	2,168
NASA	194	40	32	18	33	6	29	22	14	3
NSF	1,021	16	214	167	227	46	127	120	104	77
USDA	53	0	10	10	1	0	0	2	30	20
All other Federal	812	30	123	218	114	35	84	89	119	1,048
Institutional support	4,671	99	503	1,239	984	399	457	306	684	6,036
Other non-Federal, total	1,742	29	225	239	482	113	188	174	292	1,178
All other U.S.	1,577	26	198	211	449	96	175	160	262	974
Foreign	165	3	27	28	33	17	13	14	30	204
Self-support	3,225	65	196	885	913	412	220	96	438	16,435

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 44. Full-time graduate science, engineering, and health students with U.S. citizenship or permanent resident status in doctorate-granting institutions, by detailed field: 1991-1998

Field	1991	1992 1	1993 1	1994 1	1995 1	1996 1	1997 1	1998 1
Total, all surveyed fields	195,780	208,571	217,545	222,441	221,636	219,892	216,332	213,599
Total, science and engineering fields	172,601	183,353	189,678	191,755	188,722	185,548	180,435	176,474
Sciences, total	136,727	144,791	149,853	152,055	151,523	150,233	146,809	144,311
Physical sciences, total	17,865	18,397	18,813	18,640	17,931	17,206	16,377	16,074
Astronomy	598	621	638	694	646	642	584	581
Chemistry	10,144	10,518	10,861	10,891	10,650	10,466	10,108	9,943
Physics	7,041	7,163	7,233	6,941	6,503	5,980	5,591	5,466
Physical sciences, n.e.c.	82	95	81	114	132	118	94	84
Earth, atmos., & ocean sci., total	7,399	7,867	8,165	8,067	8,176	7,889	7,738	7,798
Atmospheric sciences	569	651	706	731	708	709	684	622
Geosciences	4,157	4,224	4,295	4,232	4,220	4,102	4,054	3,936
Oceanography	1,368	1,502	1,575	1,602	1,605	1,531	1,455	1,523
Earth, atmos., & ocean sci., n.e.c.	1,305	1,490	1,589	1,502	1,643	1,547	1,545	1,717
Mathematical sciences	7,949	8,481	8,554	8,312	7,777	7,396	6,817	6,639
Computer sciences	7,606	8,008	8,145	8,007	7,857	7,538	7,560	7,791
Agricultural sciences	6,089	6,305	6,323	6,351	6,430	6,347	6,338	6,317
Biological sciences, total	29,830	31,168	32,856	34,554	35,407	35,446	34,960	34,734
Anatomy	720	723	738	761	738	825	820	763
Biochemistry	3,225	3,314	3,409	3,516	3,598	3,518	3,424	3,460
Biology	6,546	6,678	6,920	7,065	6,948	6,935	7,109	6,858
Biometry/epidemiology	983	1,147	1,448	1,523	1,593	1,694	1,569	1,953
Biophysics	433	479	541	562	602	632	558	545
Botany	1,439	1,474	1,534	1,607	1,507	1,501	1,439	1,368
Cell biology	2,097	2,269	2,459	2,744	2,903	2,894	2,889	2,951
Ecology	758	844	875	1,026	1,122	1,096	1,053	1,074
Entomology/parasitology	679	712	718	743	709	742	736	734
Genetics	1,065	1,148	1,274	1,205	1,232	1,242	1,235	1,212
Microbio., immunology, & virology	3,210	3,306	3,372	3,452	3,538	3,504	3,457	3,474
Nutrition	1,714	1,712	1,730	1,980	2,162	2,289	2,180	2,066
Pathology	773	818	927	1,027	1,032	1,022	1,139	1,049
Pharmacology	1,672	1,717	1,887	2,045	2,000	1,943	1,910	1,978
Physiology	1,525	1,528	1,623	1,647	1,867	1,797	1,701	1,573
Zoology	1,452	1,474	1,482	1,440	1,513	1,415	1,330	1,252
Biosciences, n.e.c.	1,539	1,825	1,919	2,211	2,343	2,397	2,411	2,424
Psychology	25,309	26,529	27,106	27,176	27,214	27,499	27,667	27,413
Social sciences, total	34,680	38,036	39,891	40,948	40,731	40,912	39,352	37,545
Agricultural economics	1,041	1,097	1,048	1,083	1,056	962	881	868
Anthropology (cultural & social)	4,272	4,516	4,661	5,051	5,085	5,280	5,034	4,919
Economics (except agricultural)	4,927	5,147	5,251	5,206	4,885	4,500	3,916	3,788
Geography	1,933	2,150	2,340	2,447	2,350	2,364	2,287	2,200
Linguistics	1,467	1,455	1,555	1,533	1,517	1,577	1,453	1,308
Political science	11,877	13,435	14,207	13,904	13,485	13,238	12,724	11,934
Sociology	4,340	4,834	5,056	5,280	5,392	5,267	5,246	5,061
Sociology/anthropology	474	515	541	574	542	525	559	521
Social sciences, other	4,349	4,887	5,232	5,870	6,419	7,199	7,252	6,946
Engineering, total	35,874	38,562	39,825	39,700	37,199	35,315	33,626	32,163
Aerospace engineering	2,137	2,210	2,144	1,834	1,592	1,402	1,312	1,257
Agricultural engineering	330	377	403	438	414	393	397	398
Biomedical engineering	1,246	1,423	1,544	1,534	1,623	1,657	1,767	1,821
Chemical engineering	2,784	2,926	3,084	3,336	3,275	3,342	3,223	3,019
Civil engineering	5,891	6,683	7,084	7,481	7,246	7,147	6,694	6,508
Electrical engineering	9,589	10,169	10,016	10,003	8,988	8,392	8,179	7,731
Engineering science	767	795	822	829	823	628	618	626
Industrial/manufacturing eng.	2,639	2,945	3,068	3,025	2,696	2,397	2,284	2,109
Mechanical engineering	5,992	6,651	7,075	6,934	6,427	5,875	5,417	5,060
Metallurgical/materials eng.	2,057	2,239	2,253	2,315	2,147	1,956	1,885	1,856
Nuclear engineering	590	611	634	618	536	487	434	389
Engineering, other	1,852	1,533	1,698	1,353	1,432	1,639	1,416	1,389
Total, health fields	23,179	25,218	27,867	30,686	32,914	34,344	35,897	37,125
Clinical fields	1,368	1,502	1,665	1,834	1,919	2,002	2,272	2,262
Dental sciences	652	760	769	838	856	835	928	973
Nursing	5,444	5,425	5,748	6,495	6,927	6,953	7,224	7,010
Pharmaceutical sciences	1,214	1,100	1,176	1,317	1,195	1,173	1,172	1,168
Preventive medicine/community health	3,410	3,912	4,375	4,620	5,129	4,900	4,777	5,580
Speech pathology/audiology	4,861	5,420	5,995	6,358	6,482	6,895	7,123	7,192
Veterinary sciences	487	515	459	474	481	459	705	738
Other health fields	5,743	6,584	7,680	8,750	9,925	11,127	11,696	12,202

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 45. Full-time graduate science, engineering, and health students without U.S. citizenship or permanent resident status in doctorate-granting institutions, by detailed field: 1991-1998

Field	1991	1992 1	1993 1	1994 1	1995 1	1996 1	1997 1	1998 1
Total, all surveyed fields	92,470	93,655	90,650	87,376	84,489	84,828	86,006	87,945
Total, science and engineering fields	88,815	90,055	86,931	83,857	80,948	80,974	82,176	84,051
Sciences, total	55,609	56,380	55,075	54,045	52,312	52,215	51,967	52,408
Physical sciences, total	11,588	11,677	11,133	10,721	10,302	10,111	9,891	9,654
Astronomy	212	219	210	259	225	212	184	206
Chemistry	6,193	6,136	5,939	5,810	5,688	5,607	5,475	5,338
Physics	5,157	5,289	4,947	4,602	4,347	4,263	4,204	4,073
Physical sciences, n.e.c.	26	33	37	50	42	29	28	37
Earth, atmos., & ocean sci., total	2,524	2,618	2,634	2,817	2,552	2,366	2,196	2,154
Atmospheric sciences	288	307	272	250	248	268	280	232
Geosciences	1,378	1,484	1,504	1,544	1,388	1,292	1,167	1,109
Oceanography	563	559	555	661	578	507	469	482
Earth, atmos., & ocean sci., n.e.c.	295	268	303	362	338	299	280	331
Mathematical sciences	5,678	5,535	5,290	5,187	4,966	4,928	4,712	4,487
Computer sciences	7,264	7,761	7,682	7,382	7,359	8,095	8,942	9,679
Agricultural sciences	2,784	2,804	2,779	2,781	2,726	2,535	2,339	2,212
Biological sciences, total	11,452	11,664	11,803	11,656	11,028	10,391	10,103	10,320
Anatomy	241	237	239	222	240	217	213	198
Biochemistry	1,715	1,716	1,729	1,685	1,567	1,431	1,352	1,377
Biology	1,746	1,766	1,714	1,629	1,614	1,604	1,691	1,696
Biometry/epidemiology	448	487	542	533	500	468	436	606
Biophysics	246	249	214	208	198	175	170	162
Botany	847	805	817	738	639	627	610	621
Cell biology	619	692	727	848	789	775	760	777
Ecology	150	132	165	161	154	143	131	133
Entomology/parasitology	335	304	321	323	332	285	259	266
Genetics	306	340	366	348	340	363	385	367
Microbio., immunology, & virology	1,191	1,139	1,228	1,246	1,128	1,027	951	929
Nutrition	1,109	1,062	1,180	1,092	1,110	1,007	947	909
Pathology	312	320	337	332	318	317	279	278
Pharmacology	632	680	612	627	529	556	536	555
Physiology	638	632	597	574	509	420	401	417
Zoology	308	294	261	272	228	210	183	166
Biosciences, n.e.c.	609	809	754	818	833	766	799	863
Psychology	1,506	1,504	1,472	1,659	1,514	1,489	1,527	1,619
Social sciences, total	12,813	12,817	12,282	11,842	11,865	12,300	12,257	12,283
Agricultural economics	935	972	862	809	892	797	816	782
Anthropology (cultural & social)	715	715	671	667	577	586	592	630
Economics (except agricultural)	4,616	4,669	4,526	4,448	4,517	4,732	4,626	4,529
Geography	392	417	420	384	391	393	427	467
Linguistics	1,043	946	892	887	865	856	819	836
Political science	2,668	2,669	2,653	2,507	2,537	2,836	2,722	2,802
Sociology	1,266	1,246	1,111	1,015	892	898	942	911
Sociology/anthropology	109	97	72	70	75	65	72	87
Social sciences, other	1,069	1,086	1,075	1,055	1,119	1,137	1,241	1,239
Engineering, total	33,206	33,675	31,856	29,812	28,636	28,759	30,209	31,643
Aerospace engineering	1,121	1,059	1,083	1,133	1,076	1,143	1,193	1,287
Agricultural engineering	493	463	432	441	445	406	351	358
Biomedical engineering	654	715	690	712	654	624	644	654
Chemical engineering	2,969	2,974	2,918	2,718	2,630	2,514	2,490	2,528
Civil engineering	5,101	5,333	4,898	4,694	4,535	4,234	4,206	4,161
Electrical engineering	9,624	10,079	9,666	8,729	8,588	9,004	10,132	11,320
Engineering science	590	613	573	514	418	426	398	485
Industrial/manufacturing eng.	2,758	2,898	2,614	2,660	2,408	2,563	2,630	2,659
Mechanical engineering	5,423	5,428	5,053	4,708	4,506	4,562	4,757	4,759
Metallurgical/materials eng.	1,981	2,016	1,973	1,769	1,717	1,731	1,761	1,821
Nuclear engineering	490	473	436	379	347	284	274	273
Engineering, other	2,002	1,624	1,520	1,355	1,312	1,268	1,373	1,338
Total, health fields	3,655	3,600	3,719	3,519	3,541	3,854	3,830	3,894
Clinical fields	314	371	383	356	252	232	214	212
Dental sciences	223	228	236	210	240	281	307	310
Nursing	230	202	227	275	284	242	294	299
Pharmaceutical sciences	984	974	954	871	957	1,052	1,062	1,046
Preventive medicine/community health	961	838	865	722	721	788	762	796
Speech pathology/audiology	280	288	300	293	248	258	264	306
Veterinary sciences	219	228	214	205	238	263	267	220
Other health fields	444	471	540	587	601	738	660	705

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
Total, all institutions	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
1 University of Michigan	4,772	5,069	5,094	5,067	4,890	4,966	4,665	4,545
2 Texas A&M University	4,962	5,250	5,117	4,788	4,526	4,752	4,620	4,505
3 Stanford University	4,294	4,490	4,661	4,495	4,526	4,510	4,322	4,469
4 University of Calif at Berkeley	4,516	4,559	4,481	4,430	4,460	4,453	4,345	4,390
5 University of Minnesota	5,148	5,168	5,316	5,072	4,836	4,713	4,487	4,369
6 University of Southern California	5,171	5,399	5,260	4,546	4,272	4,126	4,259	4,333
7 Univ of Illinois at Urbana-Champaign	4,825	4,929	4,998	4,885	4,920	4,573	4,389	4,301
8 University of Wisconsin-Madison	5,257	5,412	5,466	5,294	5,044	4,698	4,507	4,250
9 University of Colorado	3,834	4,175	4,220	4,009	4,067	4,307	4,162	4,167
10 Massachusetts Institute of Technology	4,308	4,342	4,382	4,343	4,206	4,168	4,074	4,145
Total, 1st 10 institutions	47,087	48,793	48,995	46,929	45,747	45,266	43,830	43,474
11 University of Maryland - College Park	3,812	3,899	3,972	4,008	4,024	4,026	3,880	3,887
12 Pennsylvania State University	4,244	4,250	4,261	4,223	4,271	4,054	3,951	3,837
13 University of Washington	3,876	3,783	3,748	3,764	3,757	3,639	3,734	3,821
14 Ohio State University	4,596	4,607	4,671	4,420	4,332	4,053	3,764	3,818
15 University of Texas at Austin	4,559	4,715	4,722	4,550	4,199	3,529	3,860	3,794
16 University of California, Los Angeles	3,211	3,271	3,448	3,832	3,626	3,551	3,412	3,613
17 George Washington University	4,207	4,584	4,517	4,532	4,305	4,150	3,851	3,591
18 Georgia Institute of Technology	3,326	3,548	3,649	3,688	3,540	3,472	3,412	3,572
19 University of Florida	3,224	3,471	3,583	3,502	3,427	3,400	3,411	3,496
20 North Carolina State University	3,035	3,230	3,034	3,342	3,405	3,492	3,553	3,425
Total, 1st 20 institutions	85,177	88,151	88,600	86,790	84,633	82,632	80,658	80,328
21 Purdue University	3,739	3,871	3,871	3,854	3,718	3,566	3,436	3,411
22 Cornell University	3,376	3,700	3,707	3,683	3,640	3,495	3,225	3,353
23 Virginia Polytechnic Inst and State Univ	3,158	3,326	3,381	3,298	3,506	3,572	3,419	3,275
24 Arizona State University	2,893	3,156	3,154	3,077	3,080	3,084	3,100	3,107
25 Rutgers the State Univ of New Jersey	3,991	3,975	3,920	3,867	3,802	3,645	3,441	3,081
26 Harvard University	3,032	3,253	3,244	3,231	3,185	3,097	3,024	3,016
27 New York University	2,702	2,847	2,833	2,668	2,606	2,886	2,791	2,914
28 George Mason University	2,102	2,218	2,566	2,682	3,101	2,922	2,930	2,872
29 Louisiana State University	2,738	2,916	3,036	3,127	3,184	3,133	3,003	2,834
30 Michigan State University	2,906	3,093	3,171	3,064	3,005	2,981	2,862	2,826
Total, 1st 30 institutions	115,814	120,506	121,483	119,341	117,460	115,013	111,889	111,017
31 Indiana University	3,255	3,458	3,597	3,530	3,505	3,349	2,965	2,801
32 University of Arizona	3,146	3,203	3,248	3,227	3,004	2,898	2,851	2,743
33 University of Massachusetts	2,629	2,626	2,675	2,758	2,757	2,697	2,671	2,700
34 University of Pittsburgh	2,749	3,081	3,067	3,119	2,946	2,761	2,693	2,532
35 University of Kansas	1,919	2,015	2,027	2,551	2,459	2,826	2,718	2,518
36 University of Calif at Davis	2,563	2,584	2,554	2,495	2,425	2,473	2,529	2,515
37 Iowa State University	2,768	2,817	2,876	2,799	2,676	2,693	2,608	2,478
38 Columbia Univ in the City of New York	2,413	2,448	2,397	2,411	2,309	2,442	2,385	2,469
39 Boston University	2,162	2,220	2,376	2,496	2,442	2,446	2,407	2,450
40 SUNY at Buffalo	2,871	2,882	2,911	2,784	2,679	2,527	2,443	2,449
Total, 1st 40 institutions	142,289	147,840	149,211	147,511	144,662	142,125	138,159	136,672
41 University of Illinois at Chicago	2,341	2,404	2,307	2,160	2,088	2,097	2,215	2,208
42 Univ of North Carolina at Chapel Hill	2,180	2,350	2,375	2,344	2,282	2,269	2,175	2,166
43 SUNY at Albany	1,328	1,791	1,884	1,760	1,665	2,038	2,056	2,079
44 Wayne State University	2,653	2,786	2,925	2,910	2,694	2,420	2,385	2,059
45 CUNY Graduate School and Univ Center	1,776	1,795	1,664	1,699	1,573	1,529	2,022	2,022
46 Teachers College, Columbia University	1,528	1,533	1,629	1,661	1,741	1,842	1,906	1,998
47 University of Tennessee at Knoxville	2,358	2,458	2,489	2,489	2,283	2,082	1,937	1,987
48 Illinois Institute of Technology	1,818	1,916	2,079	1,913	1,542	2,138	2,058	1,983
49 DePaul University	1,381	1,359	1,435	1,460	1,467	1,640	1,743	1,942
50 University of Pennsylvania	2,477	2,472	2,456	2,360	2,386	2,104	1,929	1,933
Total, 1st 50 institutions	162,129	168,704	170,454	168,267	164,383	162,284	158,585	157,049
51 University of Cincinnati	2,223	2,161	2,175	2,233	2,267	2,183	1,945	1,930
52 Carnegie Mellon University	1,668	1,684	1,664	1,628	1,648	1,700	1,763	1,922
53 University of Chicago	1,859	2,075	2,046	2,153	2,070	1,954	1,941	1,918
54 New Jersey Institute of Technology	1,848	1,820	1,742	1,664	1,711	1,705	1,874	1,917
55 SUNY at Stony Brook	1,955	2,128	2,131	2,142	2,108	1,953	1,892	1,912
56 University of Calif at San Diego	1,804	1,795	1,798	1,781	1,814	1,812	1,846	1,890
57 American University	1,656	2,042	2,305	2,280	2,166	2,034	1,951	1,857
58 Oklahoma State University	1,794	1,823	1,773	1,747	1,785	1,719	1,718	1,851
59 Johns Hopkins University	1,249	1,377	1,389	1,610	1,645	1,677	1,734	1,835
60 University of Connecticut	2,024	2,186	2,218	2,102	2,081	2,004	1,881	1,826
Total, 1st 60 institutions	180,209	187,795	189,695	187,607	183,678	181,025	177,130	175,907

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
61 University of Houston	2,920	2,969	2,785	1,985	1,844	1,826	1,858	1,826
62 Colorado State University	1,793	1,882	1,973	1,956	1,927	1,751	1,770	1,738
63 Northeastern University	2,058	2,094	2,036	1,973	1,815	1,801	1,741	1,724
64 Nova Southeastern University	1,140	1,237	1,503	1,778	1,808	1,712	1,710	1,722
65 University of Georgia	1,598	1,702	1,781	1,855	1,837	1,798	1,818	1,715
66 Kansas State University	1,540	1,618	1,732	1,781	1,777	1,709	1,679	1,669
67 University of South Florida	1,526	1,710	1,844	1,743	1,744	1,699	1,700	1,655
68 University of New Mexico	1,625	1,674	1,862	1,817	1,819	1,735	1,607	1,612
69 University of Virginia	1,874	1,915	1,923	1,878	1,798	1,731	1,669	1,610
70 Syracuse University	1,928	2,042	1,823	1,817	1,518	1,516	1,341	1,591
Total, 1st 70 institutions	198,211	206,638	208,957	206,190	201,565	198,303	194,023	192,769
71 University of Massachusetts Lowell	1,796	1,764	1,552	1,679	1,783	1,646	1,515	1,576
72 University of Hawaii at Manoa	1,719	1,667	1,747	1,843	1,763	1,734	1,598	1,575
73 University of Kentucky	1,626	1,754	1,731	1,800	1,791	1,708	1,657	1,575
74 Drexel University	1,534	1,431	1,400	1,534	1,405	1,425	1,594	1,557
75 Rensselaer Polytechnic Institute	2,036	2,040	2,024	1,933	1,694	1,508	1,623	1,557
76 University of Nebraska - Lincoln	1,721	1,879	1,979	1,982	1,833	1,758	1,624	1,550
77 University of Utah	1,627	1,701	1,695	1,684	1,814	1,690	1,586	1,550
78 University of Calif at Santa Barbara	1,482	1,526	1,394	1,439	1,444	1,439	1,412	1,538
79 Clemson University	1,729	1,910	1,830	1,757	1,686	1,658	1,596	1,529
80 University of Oklahoma	1,846	2,015	1,953	1,774	1,703	1,732	1,547	1,527
Total, 1st 80 institutions	215,327	224,325	226,262	223,615	218,481	214,601	209,775	208,303
81 University of Central Florida	1,218	1,352	1,457	1,615	524	1,579	1,510	1,508
82 Western Michigan University	1,536	1,543	1,566	1,548	1,326	1,311	1,417	1,500
83 Northwestern University	1,800	1,843	1,799	1,719	1,645	1,638	1,516	1,479
84 University of Missouri-Columbia	1,811	1,821	1,842	1,789	1,743	1,605	1,552	1,464
85 Mississippi State University	1,151	1,150	1,210	1,165	1,119	1,132	1,149	1,458
86 Auburn University	1,732	1,772	1,887	1,854	1,849	1,687	1,529	1,451
87 University of Iowa	1,795	1,726	1,746	1,714	1,687	1,601	1,505	1,437
88 University of Delaware	1,396	1,429	1,497	1,505	1,493	1,409	1,377	1,429
89 University of Texas at Arlington	1,865	1,936	1,945	1,810	1,609	1,554	1,463	1,407
90 West Virginia University	1,234	1,320	1,443	1,409	1,324	1,285	1,414	1,406
Total, 1st 90 institutions	230,865	240,217	242,654	239,743	232,800	229,402	224,207	222,842
91 Duke University	1,333	1,335	1,363	1,361	1,337	1,310	1,337	1,400
92 Oregon State University	1,759	1,761	1,904	1,887	1,891	1,796	1,651	1,397
93 California State University, Long Beach	1,940	1,883	1,682	1,486	1,428	1,383	1,317	1,351
94 Case Western Reserve University	1,398	1,439	1,423	1,447	1,422	1,426	1,433	1,349
95 Texas Tech University	1,371	1,541	1,487	1,432	1,343	1,264	1,294	1,325
96 University of South Carolina	1,466	1,590	1,660	1,649	1,604	1,448	1,450	1,325
97 University of California, Irvine	1,306	1,445	1,493	1,442	1,392	1,357	1,309	1,319
98 Yale University	1,620	1,581	1,561	1,549	1,539	1,456	1,312	1,315
99 Princeton University	1,374	1,379	1,367	1,298	1,307	1,266	1,240	1,309
100 University of North Texas	1,043	1,329	1,308	1,287	1,230	1,205	1,297	1,296
Total, 1st 100 institutions	245,475	255,500	257,902	254,581	247,293	243,313	237,847	236,228
101 University of Wisconsin-Milwaukee	1,625	1,586	1,538	1,484	1,427	1,384	1,327	1,286
102 Old Dominion University	1,100	1,077	1,244	1,232	1,237	1,248	1,274	1,281
103 Florida State University	1,360	1,335	1,377	1,402	1,506	1,389	1,306	1,266
104 Southern Illinois Univ at Carbondale	1,365	1,305	1,326	1,304	1,282	1,213	1,154	1,246
105 San Diego State University	1,371	1,499	1,544	1,473	1,148	1,277	1,246	1,237
106 Washington University	1,353	1,390	1,361	1,339	1,308	1,226	1,196	1,232
107 University of Akron	1,314	1,348	1,321	1,320	1,344	1,369	1,361	1,231
108 University of Idaho	1,068	1,063	1,115	1,145	1,081	1,018	1,149	1,208
109 Polytechnic University	1,600	1,649	1,559	1,438	1,505	1,427	1,372	1,200
110 Washington State University	1,255	1,306	1,359	1,421	1,450	1,391	1,228	1,200
Total, 1st 110 institutions	258,886	269,058	271,646	268,139	260,581	256,255	250,460	248,615
111 University of Arkansas Main	943	1,027	1,202	1,225	1,321	1,236	1,062	1,195
112 Southern Methodist University	815	950	997	1,031	1,131	1,222	1,260	1,167
113 Stevens Institute of Technology	1,313	1,335	1,416	1,360	1,305	1,390	1,326	1,163
114 Vanderbilt University	965	970	1,026	1,117	1,137	1,154	1,129	1,121
115 Utah State University	1,187	1,272	1,363	1,370	1,337	1,229	1,143	1,120
116 Univ of Puerto Rico Rio Piedras Campus	1,008	1,096	1,138	1,129	1,083	1,065	1,086	1,113
117 University of Texas at Dallas	980	1,002	1,017	946	944	1,033	1,134	1,109
118 University of Alabama at Birmingham, The	759	792	827	815	789	920	1,028	1,101
119 Antioch University	1,531	1,617	1,532	1,590	1,474	1,430	1,320	1,083
120 Portland State University	968	1,032	1,026	1,061	1,009	1,026	1,001	1,072
Total, 1st 120 institutions	269,355	280,151	283,190	279,783	272,111	267,960	261,949	259,859

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
121 SUNY at Binghamton	1,142	1,141	1,129	1,132	1,093	1,072	1,093	1,067
122 Brigham Young University	927	1,016	1,069	1,193	1,154	1,188	1,179	1,059
123 New Mexico State University	956	1,271	1,295	1,239	1,208	1,168	1,090	1,053
124 University of Rochester	1,349	1,361	1,372	1,305	1,226	1,146	1,097	1,032
125 Virginia Commonwealth University	1,144	1,160	1,157	1,139	1,213	1,146	1,022	1,024
126 Florida International University	740	783	856	1,036	1,083	1,046	1,041	1,015
127 Georgia State University	950	1,025	999	1,097	1,102	1,024	1,032	1,004
128 New School University	908	1,164	1,029	1,032	1,008	1,031	1,060	1,000
129 University of Alabama, The	882	934	974	963	985	1,070	1,040	1,000
130 University of Louisville	1,084	1,132	1,122	1,125	1,099	1,095	963	998
Total, 1st 130 institutions	279,437	291,138	294,192	291,044	283,282	278,946	272,566	270,111
131 University of Miami	1,150	1,189	1,196	1,252	1,172	1,095	1,012	996
132 Northern Illinois University	1,023	1,025	1,065	1,097	1,109	1,055	1,034	993
133 Lehigh University	1,022	1,114	1,099	1,085	999	1,072	1,030	987
134 Wichita State University	643	742	712	705	761	812	865	986
135 California Institute of Technology	1,125	1,152	1,131	1,087	1,073	1,022	1,031	982
136 Tufts University	927	999	1,044	1,061	1,008	1,062	1,052	978
137 University of Nevada, Reno	825	922	911	956	963	918	956	966
138 Fielding Institute, The	478	475	513	484	899	905	948	937
139 Long Island University	862	1,112	1,142	1,041	1,137	1,089	1,069	935
140 Univ of Maryland - Baltimore County	1,015	1,040	1,052	1,035	1,027	964	869	929
Total, 1st 140 institutions	288,507	300,908	304,057	300,847	293,430	288,940	282,432	279,800
141 University of Toledo	695	742	754	750	818	963	925	915
142 Temple University	1,189	1,164	1,241	1,163	1,078	1,264	979	910
143 University of Memphis	851	832	885	927	873	757	1,037	897
144 Ohio University	959	970	942	927	921	928	940	896
145 US Naval Postgraduate School	1,329	1,305	1,280	1,195	1,049	927	872	890
146 Wright State University	893	909	864	815	845	873	851	867
147 University of Missouri-Rolla	1,261	1,216	1,144	1,021	1,016	914	886	848
148 Oakland University	678	665	700	706	803	819	841	841
149 Santa Clara University	1,222	1,226	1,144	952	945	927	956	841
150 University of Notre Dame	804	872	868	855	859	873	846	826
Total, 1st 150 institutions	298,388	310,809	313,879	310,158	302,637	298,185	291,565	288,531
151 New York Institute of Technology	887	1,025	997	961	1,013	960	872	819
152 Worcester Polytechnic Institute	865	704	712	711	634	603	596	816
153 Florida Atlantic University	822	940	1,006	980	929	895	857	810
154 Fairleigh Dickinson University	1,005	1,070	1,020	849	841	871	841	804
155 University of Rhode Island	1,095	1,149	1,148	1,129	1,096	900	800	800
156 Loyola University of Chicago	610	633	645	701	794	832	831	793
157 University of Wyoming	820	835	877	877	818	761	846	789
158 Kent State University	807	830	806	811	849	799	824	786
159 University of Denver	944	809	831	858	808	768	727	768
160 Colorado School of Mines	781	889	869	851	806	778	765	762
Total, 1st 160 institutions	307,024	319,693	322,790	318,886	311,225	306,352	299,524	296,478
161 Rice University	825	852	844	811	752	723	737	746
162 Tulane University	751	824	860	897	834	829	726	743
163 Florida Institute of Technology	882	904	828	801	754	756	743	740
164 University of Calif at Riverside	733	757	763	729	795	757	785	739
165 University of New Hampshire	634	669	687	660	689	795	757	737
166 University of Calif at Santa Cruz	628	671	690	717	732	732	726	734
167 Marshall University	204	198	204	224	250	264	544	723
168 Pepperdine University	935	1,040	1,084	1,039	943	806	739	713
169 Univ of Puerto Rico Mayaguez Campus	439	495	524	520	582	663	727	712
170 Emory University	549	595	649	685	719	713	711	707
Total, 1st 170 institutions	313,604	326,698	329,923	325,969	318,275	313,390	306,719	303,772
171 Marquette University	620	596	578	600	556	591	626	707
172 Brown University	781	847	797	766	760	733	717	701
173 Calif Sch of Prof Psych - Los Angeles	534	495	537	541	361	280	725	686
174 Loyola College	755	823	861	853	756	745	699	684
175 University of Oregon	822	845	787	778	771	703	675	682
176 University of Alabama in Huntsville, The	1,018	939	1,012	926	819	706	697	680
177 Cleveland State University	1,142	1,141	1,160	1,151	1,122	758	774	670
178 Claremont Graduate School	552	573	613	683	659	684	712	655
179 Southwest Texas State University	600	626	656	689	703	698	624	643
180 Georgetown University	633	690	693	744	746	716	722	641
Total, 1st 180 institutions	321,061	334,273	337,617	333,700	325,528	320,004	313,690	310,521

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
181 Yeshiva University	607	609	561	571	585	579	594	634
182 Calif Sch of Prof Psych - San Diego	617	592	643	582	573	618	642	620
183 Villanova University	959	938	884	857	758	702	727	607
184 University of Mississippi	661	661	659	714	700	682	631	599
185 Howard University	739	657	677	761	741	727	698	592
186 University of Maine	706	811	783	757	737	666	584	586
187 University of Montana	520	588	601	588	593	550	552	583
188 University of Texas at El Paso	656	755	667	660	578	588	579	576
189 University of Southern Mississippi	442	444	462	548	634	604	582	573
190 Loma Linda University	105	150	138	169	194	278	533	570
Total, 1st 190 institutions	327,073	340,478	343,692	339,907	331,621	325,998	319,812	316,461
191 Montana State University-Bozeman	482	559	626	605	594	569	551	569
192 Univ of Texas Hlth Sci Ctr at Houston	428	495	499	541	560	588	584	566
193 Pace University	855	791	845	808	564	829	564	561
194 Walden University	0	0	0	0	0	223	310	555
195 Brandeis University	428	432	465	473	524	565	549	550
196 Rochester Institute of Technology	952	1,006	896	776	623	621	560	548
197 Illinois State University	505	550	544	514	549	564	547	547
198 Michigan Technological University	483	510	554	573	584	555	543	546
199 Allegheny University of Health Sciences	387	396	409	422	513	482	510	544
200 Seton Hall University	396	413	430	394	610	577	546	543
Total, 1st 200 institutions	331,989	345,630	348,960	345,013	336,742	331,571	325,076	321,990
201 University of Vermont	623	648	632	629	680	570	538	541
202 Northern Arizona University	783	763	572	587	572	549	517	538
203 North Dakota State University	599	616	590	606	589	584	536	525
204 Texas Woman's University	510	518	498	508	503	573	526	521
205 University of Alaska Fairbanks	480	571	603	627	600	587	571	503
206 Caribbean Center for Advanced Studies	386	299	181	203	325	320	319	502
207 University of Nevada at Las Vegas	357	421	495	531	567	521	510	495
208 Bowling Green State University	556	591	659	667	708	609	573	492
209 Miami University (OH)	458	460	507	518	483	425	434	483
210 University of Nebraska - Omaha	559	630	631	595	535	526	514	483
Total, 1st 210 institutions	337,300	351,147	354,328	350,484	342,304	336,835	330,114	327,073
211 University of Dayton	788	739	804	788	651	635	551	482
212 Catholic University of America	684	736	739	672	602	598	518	480
213 Saint John's University	457	533	558	556	530	469	455	466
214 University of Missouri-Kansas City	552	543	490	431	512	470	467	465
215 Central Michigan University	292	341	324	353	363	422	425	462
216 Fordham University	598	584	633	559	500	472	471	458
217 Boston College	464	472	475	493	480	495	464	454
218 Ball State University	335	395	412	436	442	486	482	453
219 University of North Dakota	281	324	339	335	333	324	324	451
220 University of Detroit Mercy	599	620	596	626	607	484	454	441
Total, 1st 220 institutions	342,350	356,434	359,698	355,733	347,324	341,690	334,725	331,685
221 Saint Louis University	395	438	453	478	479	475	430	430
222 Air Force Institute of Technology	589	588	550	481	514	533	504	426
223 SUNY College of Env Science and Forestry	427	457	428	415	410	395	400	426
224 South Dakota State University	482	485	521	498	499	497	459	421
225 Union Institute	523	381	724	673	512	302	274	410
226 East Carolina University	259	343	375	313	333	331	331	405
227 University of Southwestern Louisiana	562	583	483	466	429	469	438	402
228 College of William and Mary	371	431	432	436	450	434	394	401
229 Tennessee State University	226	242	216	327	388	375	382	401
230 Golden Gate University	192	215	157	331	476	381	488	389
Total, 1st 230 institutions	346,376	360,597	364,037	360,151	351,814	345,882	338,825	335,796
231 Sam Houston State University	362	355	375	386	374	369	315	387
232 University of Missouri-St. Louis	281	323	310	425	455	438	392	382
233 Texas A&M University-Kingsville	306	415	456	393	408	378	484	381
234 Fuller Theological Seminary	343	352	373	381	416	408	396	369
235 University of Calif at San Francisco	299	299	315	352	330	338	330	362
236 California Institute of Integral Studies	362	362	447	416	450	487	381	360
237 Hofstra University	402	349	342	356	346	335	371	360
238 Adelphi University	380	387	317	271	248	287	318	355
239 Univ of Texas SW Medical Ctr at Dallas	284	349	361	385	381	379	352	355
240 University of Maryland at Baltimore	355	360	320	324	285	315	333	349
Total, 1st 240 institutions	349,750	364,148	367,653	363,840	355,507	349,616	342,497	339,456

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
241 Duquesne University	222	261	280	382	335	393	337	341
242 Univ of North Carolina at Greensboro	303	351	355	370	305	288	295	339
243 University of South Alabama	342	362	318	328	326	367	338	336
244 University of Bridgeport	33	133	148	135	148	172	298	327
245 Indiana University of Pennsylvania	140	158	203	301	333	296	317	321
246 Clark Atlanta University	323	387	386	418	382	374	347	319
247 Baylor College of Medicine	246	262	279	273	285	284	302	317
248 Tennessee Technological University	323	336	314	319	323	307	308	315
249 Jackson State University	251	263	304	332	328	322	324	313
250 Indiana State University	319	307	330	343	345	346	369	312
Total, 1st 250 institutions	352,252	366,968	370,570	367,041	358,617	352,765	345,732	342,696
251 University of Tulsa	280	321	339	346	350	310	300	312
252 Texas A&M University-Commerce	346	340	303	245	244	244	278	310
253 Calif Sch of Prof Psych - Fresno	366	385	393	370	399	411	339	308
254 Dartmouth College	362	381	384	371	363	351	357	308
255 US International University	492	468	473	419	378	378	409	300
256 University of Hartford	235	239	288	271	272	288	249	295
257 Wright Institute, The	199	208	221	242	253	248	245	293
258 Middle Tennessee State University	529	580	596	557	435	441	323	287
259 Pacific Graduate School of Psychology	341	373	348	351	314	349	299	285
260 Baylor University	284	337	352	363	337	332	298	282
Total, 1st 260 institutions	355,686	370,600	374,267	370,576	361,962	356,117	348,829	345,676
261 Lamar University	401	457	397	349	295	290	294	280
262 Louisiana Tech University	284	364	386	345	303	306	327	280
263 Oregon Grad Inst of Science & Technology	213	291	320	318	287	205	301	279
264 Clark University	275	273	266	261	351	320	269	277
265 East Tennessee State University	265	267	311	304	321	325	392	268
266 Idaho State University	264	291	364	374	377	325	277	266
267 Cal Schl of Prof Psych Berkeley/Alameda	519	528	508	455	428	370	286	262
268 Thomas Jefferson University	183	212	224	249	297	307	281	260
269 Stephen F. Austin State University	201	231	230	260	243	247	271	254
270 Finch U of Hlth Sci/The Chicago Med Sch	124	130	137	133	269	288	277	253
Total, 1st 270 institutions	358,415	373,644	377,410	373,624	365,133	359,100	351,804	348,355
271 Wake Forest University	229	231	245	290	272	276	275	245
272 New Mexico Institute of Mining and Tech	253	260	255	232	222	233	224	232
273 Medical University of South Carolina	154	173	192	193	237	238	235	225
274 Forest Institute of Professional Psych	206	185	169	162	148	166	181	224
275 Florida A&M University	133	130	177	229	268	251	243	218
276 Univ of Med and Dentistry of New Jersey	239	188	204	225	206	197	198	214
277 James Madison University	108	113	120	97	103	104	166	212
278 CUNY Hunter College	419	414	383	378	374	203	186	206
279 South Dakota School of Mines and Tech	274	248	219	194	208	196	183	205
280 University of South Dakota	202	219	207	207	221	225	209	203
Total, 1st 280 institutions	360,632	375,805	379,581	375,831	367,392	361,189	353,904	350,539
281 Chicago School of Prof Psych	134	139	148	159	169	180	183	199
282 Medical College of Wisconsin	107	120	119	126	125	117	144	199
283 CUNY Mt. Sinai School of Medicine	164	156	170	169	174	178	183	192
284 University of Northern Colorado	182	224	231	216	166	180	181	192
285 Univ of Texas Hlth Sci Ctr San Antonio	133	157	163	168	169	182	189	190
286 Slippery Rock University of Pennsylvania	193	177	191	123	123	168	158	189
287 Philadelphia Col of Osteopathic Med	0	0	0	0	85	120	157	188
288 University of La Verne	125	176	202	118	154	130	204	188
289 American International College	164	169	123	123	124	122	184	184
290 University of Tennessee, Memphis	112	131	150	157	156	134	158	181
Total, 1st 290 institutions	361,946	377,254	381,078	377,190	368,837	362,700	355,645	352,441
291 Clarkson University	286	279	287	254	239	226	216	180
292 New York Medical College	160	179	199	241	239	238	188	174
293 Mercer University	113	154	147	147	154	147	167	161
294 Northeast Louisiana University	101	108	118	147	119	172	181	157
295 Univ of Texas Med Branch at Galveston	128	139	145	158	152	140	160	148
296 University of Arkansas - Med Sci Campus	61	75	104	113	124	138	131	145
297 Mayo Graduate School	104	116	120	114	136	133	141	142
298 Spalding University	107	112	91	115	117	125	137	137
299 Oregon Health Sciences University	118	120	126	138	143	135	123	136
300 Alabama A&M University	254	268	312	272	202	194	250	134
Total, 1st 300 institutions	363,378	378,804	382,727	378,889	370,462	364,348	357,339	353,955

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions,
ranked by 1998 total graduate science and engineering students: 1991-1998**

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Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
301 Woods Hole Oceanographic Institution	102	113	112	120	115	137	137	134
302 Alfred University	115	124	144	174	154	170	129	130
303 Eastern Virginia Medical School	118	126	138	156	155	136	139	130
304 Meharry Medical College	54	60	69	144	140	139	131	125
305 University of Maryland Eastern Shore	104	115	90	104	89	98	113	123
306 Texas Christian University	124	140	149	146	153	142	136	122
307 Hampton University	64	83	90	129	123	98	76	118
308 University of Northern Iowa	77	74	92	154	173	168	155	118
309 Wesleyan University	128	132	139	143	120	120	119	117
310 The Rockefeller University	128	134	136	132	125	93	105	110
Total, 1st 310 institutions	364,392	379,905	383,886	380,291	371,809	365,649	358,579	355,182
311 University of Puerto Rico Med Sci Campus	113	89	132	128	144	135	96	110
312 Andrews University	131	163	157	139	133	144	111	98
313 Creighton University	71	77	93	53	120	129	93	98
314 Medical College of Georgia	82	84	88	96	93	100	101	98
315 Bryn Mawr College	154	123	120	111	115	114	108	97
316 Medical College of Ohio	0	0	52	227	148	155	112	94
317 Widener University	133	143	148	152	145	132	106	88
318 Rush University	90	98	103	100	100	77	75	85
319 Albany Medical College	70	88	96	95	102	93	96	80
320 Maharishi University of Management	76	64	51	48	33	35	48	78
Total, 1st 320 institutions	365,312	380,834	384,926	381,440	372,942	366,763	359,525	356,108
321 University of Nebraska Medical Center	60	69	76	81	84	87	86	78
322 Institute of Paper Science & Technology	70	73	77	79	83	76	68	74
323 University of San Diego	42	38	47	58	56	51	51	73
324 SUNY Health Science Center at Syracuse	68	64	72	71	65	68	68	72
325 SUNY Health Science Center at Brooklyn	98	119	104	94	82	76	78	66
326 Uniformed Serv Univ of the Hlth Sciences	88	71	66	57	58	55	63	62
327 CUNY Herbert H. Lehman College	61	53	65	72	41	70	52	57
328 RAND Graduate School of Policy Studies	60	55	61	55	56	52	49	54
329 University of the Pacific	59	51	48	54	51	55	50	49
330 Biola University	188	156	155	149	146	174	167	48
Total, 1st 330 institutions	366,106	381,583	385,697	382,210	373,664	367,527	360,257	356,741
331 Union College	144	137	124	98	73	59	37	42
332 Philadelphia Coll of Pharmacy and Sci	29	31	33	29	30	26	21	29
333 Institute of Textile Technology	30	28	34	29	25	27	28	27
334 Mass College of Pharmacy/Allied Health	24	24	20	20	20	20	23	23
335 Ponce School of Medicine	15	13	14	12	16	13	17	17
336 Morehouse School of Medicine	0	4	9	21	12	22	16	16
337 Baylor College of Dentistry	6	7	9	7	9	7	7	10
338 The Pontifical Cath Univ of Puerto Rico	0	0	15	20	20	10	11	10
339 Smith College	6	8	7	4	4	7	7	4
340 Atlanta University	0	0	0	0	0	0	0	0
Total, 1st 340 institutions	366,360	381,835	385,962	382,450	373,873	367,718	360,424	356,919
341 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
342 Emerson College	0	0	0	0	0	0	0	0
343 Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0
344 Medical College of Pennsylvania, The	78	85	73	80	0	0	0	0
345 Midwestern University	0	0	0	0	0	0	0	0
346 Oral Roberts University	0	0	0	0	0	0	0	0
347 Pacific University	0	0	0	0	0	0	0	0
348 SUNY College of Optometry	0	0	0	0	0	0	0	0
349 U of North TX Hlth Sci Ctr at Ft Worth	0	0	0	0	0	0	0	0
350 Univ of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0
Total, 1st 350 institutions	366,438	381,920	386,035	382,530	373,873	367,718	360,424	356,919
351 Univ of Texas M.D. Anderson Cancer Ctr	0	0	0	0	0	0	0	0
352 University of New England	9	3	3	0	0	0	0	0
353 Xavier University of Louisiana	0	0	0	0	0	0	0	0
Total, 1st 353 institutions	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919

NOTE: Includes medical schools

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 47. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions,
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	30,806	32,680	34,254	36,289	35,828	37,028	38,103	39,494
Total, science and engineering fields	22,813	23,829	24,605	25,734	26,087	26,513	26,896	27,359
Sciences, total	20,570	21,478	22,171	23,144	23,459	23,851	23,952	24,540
Physical sciences, total	5,691	5,758	5,640	5,849	5,829	5,803	5,864	5,892
Astronomy	210	206	219	246	276	312	317	357
Chemistry	3,647	3,564	3,555	3,710	3,637	3,568	3,703	3,691
Physics	1,814	1,949	1,827	1,849	1,820	1,837	1,745	1,805
Physical sciences, n.e.c.	20	39	39	44	96	86	99	39
Earth, atmos., & ocean sci., total	623	690	762	815	845	859	934	893
Atmospheric sciences	59	64	81	89	88	80	98	85
Geosciences	369	399	423	435	440	449	486	459
Oceanography	161	186	204	237	258	244	258	249
Earth, atmos., & ocean sci., n.e.c.	34	41	54	54	59	86	92	100
Mathematical sciences	206	201	224	239	259	326	302	274
Computer sciences	120	144	164	183	213	247	315	363
Agricultural sciences	565	630	698	705	688	665	692	656
Biological sciences, total	12,479	13,172	13,785	14,417	14,672	14,918	14,916	15,474
Anatomy	509	496	462	503	506	537	580	574
Biochemistry	2,120	2,157	2,368	2,379	2,409	2,466	2,531	2,524
Biology	1,398	1,475	1,460	1,576	1,601	1,633	1,537	1,725
Biometry/epidemiology	100	122	131	128	153	153	159	155
Biophysics	156	176	176	184	230	252	240	239
Botany	488	492	511	590	630	599	596	581
Cell biology	1,264	1,308	1,441	1,649	1,764	1,725	1,717	1,973
Ecology	49	60	65	88	95	107	131	108
Entomology/parasitology	236	223	223	190	179	183	216	181
Genetics	625	671	665	661	752	719	708	707
Microbio., immunology, & virology	1,715	1,784	1,881	1,924	1,943	1,975	2,019	2,109
Nutrition	171	196	210	192	186	198	209	234
Pathology	1,075	1,170	1,202	1,256	1,188	1,220	1,359	1,297
Pharmacology	1,153	1,286	1,327	1,375	1,401	1,418	1,333	1,427
Physiology	1,060	1,139	1,150	1,109	1,026	1,089	1,118	1,118
Zoology	161	165	174	171	164	135	108	140
Biosciences, n.e.c.	199	252	339	442	445	509	355	382
Psychology	507	523	520	546	577	589	567	606
Social sciences, total	379	360	378	390	376	444	362	382
Agricultural economics	39	49	46	45	39	56	50	32
Anthropology (cultural & social)	51	59	52	57	67	74	59	61
Economics (except agricultural)	40	22	38	46	27	16	19	29
Geography	15	22	28	26	16	22	12	18
Linguistics	14	26	29	20	16	36	19	18
Political science	78	49	35	44	36	35	32	62
Sociology	90	72	72	78	91	127	102	79
Sociology/anthropology	1	3	5	4	0	0	0	0
Social sciences, other	51	58	73	70	84	78	69	83
Engineering, total	2,243	2,351	2,434	2,590	2,628	2,662	2,944	2,819
Aerospace engineering	77	92	116	100	101	109	125	133
Agricultural engineering	35	37	39	45	46	48	58	56
Biomedical engineering	61	81	85	141	134	143	158	180
Chemical engineering	568	535	526	521	569	541	628	603
Civil engineering	185	187	181	210	200	230	240	216
Electrical engineering	339	313	383	407	378	393	504	497
Engineering science	117	71	78	95	101	93	115	110
Industrial/manufacturing eng.	27	38	63	53	29	28	27	30
Mechanical engineering	324	349	355	383	402	417	435	425
Metallurgical/materials eng.	392	450	403	441	490	496	464	393
Nuclear engineering	29	34	40	39	28	28	33	19
Engineering, other	89	164	165	155	150	136	157	157
Total, health fields	7,993	8,851	9,649	10,555	9,741	10,515	11,207	12,135
Clinical fields	6,366	7,065	7,614	8,329	7,428	8,019	8,539	9,417
Dental sciences	77	75	102	195	227	172	172	166
Nursing	28	28	40	48	43	23	38	43
Pharmaceutical sciences	475	486	534	575	504	509	513	521
Preventive medicine/community health	204	231	248	264	291	307	344	316
Speech pathology/audiology	41	47	49	40	53	46	36	57
Veterinary sciences	119	117	133	138	159	190	217	216
Other health fields	683	802	929	966	1,036	1,249	1,348	1,399

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 48. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions, by detailed field and primary source of support, and number of postdoctoral appointees without U.S. citizenship or permanent resident status : 1998

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Field	Total	Source of support				Number of post-doctoral appointees without U.S. citizenship or permanent resident status	
		Federal			Non-Federal		
		Total	Fellowships	Trainee-ships	Research grants		
Total, all surveyed fields	39,494	27,141	4,049	2,840	20,252	12,353	20,014
Total, science and engineering fields	27,359	19,859	2,333	1,292	16,234	7,500	14,664
Sciences, total	24,540	17,903	2,220	1,271	14,412	6,637	12,774
Physical sciences, total	5,892	4,548	358	37	4,153	1,344	3,560
Astronomy	357	326	36	0	290	31	152
Chemistry	3,691	2,687	246	28	2,413	1,004	2,298
Physics	1,805	1,501	75	9	1,417	304	1,089
Physical sciences, n.e.c.	39	34	1	0	33	5	21
Earth, atmos., & ocean sci., total	893	749	71	12	666	144	370
Atmospheric sciences	85	80	0	0	80	5	33
Geosciences	459	362	27	7	328	97	196
Oceanography	249	222	43	5	174	27	102
Earth, atmos., & ocean sci., n.e.c.	100	85	1	0	84	15	39
Mathematical sciences	274	177	39	2	136	97	149
Computer sciences	363	265	36	0	229	98	181
Agricultural sciences	656	364	28	1	335	292	316
Biological sciences, total	15,474	11,212	1,574	1,084	8,554	4,262	7,949
Anatomy	574	438	53	58	327	136	297
Biochemistry	2,524	1,897	220	118	1,559	627	1,362
Biology	1,725	1,285	216	88	981	440	827
Biometry/epidemiology	155	116	20	69	27	39	45
Biophysics	239	179	30	12	137	60	101
Botany	581	391	46	0	345	190	325
Cell biology	1,973	1,379	276	71	1,032	594	894
Ecology	108	74	17	2	55	34	21
Entomology/parasitology	181	112	7	0	105	69	91
Genetics	707	452	105	53	294	255	374
Microbio., immunology, & virology	2,109	1,584	165	179	1,240	525	1,136
Nutrition	234	133	18	11	104	101	138
Pathology	1,297	784	99	150	535	513	706
Pharmacology	1,427	1,115	154	146	815	312	756
Physiology	11,118	896	98	101	697	222	640
Zoology	140	93	21	2	70	47	32
Biosciences, n.e.c.	382	284	29	24	231	98	204
Psychology	606	432	79	109	244	174	127
Social sciences, total	382	156	35	26	95	226	122
Agricultural economics	32	18	1	0	17	14	18
Anthropology (cultural & social)	61	20	6	0	14	41	12
Economics (except agricultural)	29	3	1	0	2	26	7
Geography	18	10	0	0	10	8	10
Linguistics	18	10	2	3	5	8	6
Political science	62	9	2	0	7	53	18
Sociology	79	49	6	19	24	30	14
Sociology/anthropology	0	0	0	0	0	0	0
Social sciences, other	83	37	17	4	16	46	37
Engineering, total	2,819	1,956	113	21	1,822	863	1,890
Aerospace engineering	133	95	9	1	85	38	76
Agricultural engineering	56	30	2	0	28	26	38
Biomedical engineering	180	147	12	11	124	33	106
Chemical engineering	603	413	43	2	368	190	415
Civil engineering	216	126	10	2	114	90	144
Electrical engineering	497	346	13	0	333	151	312
Engineering science	110	97	4	0	93	13	63
Industrial eng./manufacturing eng.	30	11	0	0	11	19	13
Mechanical engineering	425	286	4	2	280	139	322
Metallurgical/materials eng.	393	258	11	3	244	135	283
Nuclear engineering	19	19	0	0	19	0	11
Engineering, other	157	128	5	0	123	29	107

See explanatory information, if any, and SOURCE at end of table.

Table 48. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions, by detailed field and primary source of support, and number of postdoctoral appointees without U.S. citizenship or permanent resident status : 1998

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Field	Total	Source of support				Non-Federal	Number of post-doctoral appointees without U.S. citizenship or permanent resident status		
		Federal							
		Total	Fellowships	Trainee-ships	Research grants				
Total, health fields	12,135	7,282	1,716	1,548	4,018	4,853	5,350		
Clinical fields	9,417	5,589	1,485	1,250	2,854	3,828	4,150		
Dental sciences	166	115	13	30	72	51	74		
Nursing	43	27	3	21	3	16	3		
Pharmaceutical sciences	521	340	20	16	304	181	311		
Preventive medicine/community health	316	222	37	46	139	94	105		
Speech pathology/audiology	57	44	6	9	29	13	20		
Veterinary sciences	216	107	22	12	73	109	70		
Other health fields	1,399	838	130	164	544	561	617		

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 49. Nonfaculty research scientists, engineers, and health professionals with doctorates
in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields	5,457	5,464	5,993	6,208	6,517	6,594	6,670	7,043
Total, science and engineering fields	4,517	4,381	4,800	4,988	5,176	5,150	5,209	5,250
Sciences, total	3,858	3,644	3,997	4,163	4,387	4,420	4,361	4,441
Physical sciences, total	1,000	1,066	1,223	1,244	1,374	1,288	1,204	1,081
Astronomy	66	70	100	151	158	154	144	122
Chemistry	474	472	538	522	538	548	504	482
Physics	459	523	584	569	658	568	554	473
Physical sciences, n.e.c.	1	1	1	2	20	18	2	4
Earth, atmos., & ocean sci., total	298	302	340	363	418	430	427	411
Atmospheric sciences	26	21	40	27	21	46	76	48
Geosciences	129	153	138	198	218	190	147	154
Oceanography	137	114	132	118	152	167	163	172
Earth, atmos., & ocean sci., n.e.c.	6	14	30	20	27	27	41	37
Mathematical sciences	84	70	52	72	93	88	92	88
Computer sciences	50	42	67	48	66	107	87	123
Agricultural sciences	197	189	170	251	228	209	203	155
Biological sciences, total	1,857	1,691	1,844	1,854	1,958	1,904	1,970	2,221
Anatomy	50	39	52	39	48	59	58	41
Biochemistry	351	284	294	270	337	322	330	329
Biology	250	265	324	325	324	315	294	390
Biometry/epidemiology	33	26	36	37	32	26	24	33
Biophysics	36	38	49	54	58	44	54	41
Botany	122	79	97	86	88	66	62	76
Cell biology	147	158	201	176	210	194	195	220
Ecology	26	19	21	14	21	18	20	13
Entomology/parasitology	78	64	74	59	60	51	55	53
Genetics	70	53	67	63	65	79	121	77
Microbio., immunology, & virology	150	159	155	206	187	195	231	216
Nutrition	86	60	56	81	63	56	54	43
Pathology	102	123	114	145	132	136	114	135
Pharmacology	150	116	142	128	169	164	151	288
Physiology	143	136	99	103	115	119	147	164
Zoology	40	30	20	29	16	13	15	18
Biosciences, n.e.c.	23	42	43	39	33	47	45	84
Psychology	192	152	171	203	146	232	200	225
Social sciences, total	180	132	130	128	104	162	178	137
Agricultural economics	13	12	14	15	12	17	27	31
Anthropology (cultural & social)	57	35	43	48	34	34	13	11
Economics (except agricultural)	6	6	3	3	9	16	6	3
Geography	4	6	6	9	4	11	17	14
Linguistics	49	9	5	8	2	4	11	5
Political science	3	7	3	2	6	15	10	3
Sociology	26	24	16	9	11	15	34	27
Sociology/anthropology	0	0	0	0	0	3	5	4
Social sciences, other	22	33	40	34	26	47	55	39
Engineering, total	659	737	803	825	789	730	848	809
Aerospace engineering	26	39	69	66	80	86	84	68
Agricultural engineering	12	10	5	23	27	15	19	28
Biomedical engineering	16	26	26	36	26	21	31	34
Chemical engineering	61	148	126	87	70	82	159	149
Civil engineering	54	52	67	54	66	69	66	61
Electrical engineering	121	123	135	159	175	144	168	154
Engineering science	16	16	34	30	37	38	50	49
Industrial/manufacturing eng.	20	17	7	6	3	2	7	5
Mechanical engineering	113	97	116	135	108	108	109	106
Metallurgical/materials eng.	147	131	142	139	120	95	83	120
Nuclear engineering	34	37	27	36	32	29	28	4
Engineering, other	39	41	49	54	45	41	44	31
Total, health fields	940	1,083	1,193	1,220	1,341	1,444	1,461	1,793
Clinical fields	646	717	718	786	898	947	972	1,245
Dental sciences	16	20	27	11	12	14	51	45
Nursing	2	9	5	8	7	15	16	12
Pharmaceutical sciences	83	81	115	101	118	99	97	98
Preventive medicine/community health	55	65	95	105	90	118	79	102
Speech pathology/audiology	7	7	13	12	20	14	13	26
Veterinary sciences	30	47	45	58	53	67	61	68
Other health fields	101	137	175	139	143	170	172	197

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 50. Graduate students in science, engineering, and health fields in historically black colleges
and universities, by detailed field, citizenship, and racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	5,322	3,506	18	178	58	820	141	601
Total, science and engineering fields	4,458	3,060	9	146	44	491	129	579
Sciences, total	3,883	2,777	7	114	36	431	97	421
Physical sciences, total	344	229	0	16	5	13	17	64
Astronomy	0	0	0	0	0	0	0	0
Chemistry	201	124	0	7	4	8	8	50
Physics	123	91	0	9	0	5	9	9
Physical sciences, n.e.c.	20	14	0	0	1	0	0	5
Earth, atmos., & ocean sci., total	78	40	0	0	1	25	1	11
Atmospheric sciences	0	0	0	0	0	0	0	0
Geosciences	0	0	0	0	0	0	0	0
Oceanography	0	0	0	0	0	0	0	0
Earth, atmos., & ocean sci., n.e.c.	78	40	0	0	1	25	1	11
Mathematical sciences	150	107	0	7	3	21	3	9
Computer sciences	463	200	2	58	8	33	49	113
Agricultural sciences	175	137	0	1	3	20	8	6
Biological sciences, total	741	570	3	21	4	41	7	95
Anatomy	4	2	0	0	0	1	0	1
Biochemistry	20	17	0	1	0	1	0	1
Biology	379	315	1	9	4	22	0	28
Biometry/epidemiology	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0
Botany	40	27	0	1	0	0	0	12
Cell biology	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0
Genetics	29	15	0	3	0	4	2	5
Microbio., immunology, & virology	44	36	0	2	0	1	5	0
Nutrition	92	48	2	3	0	4	0	35
Pathology	0	0	0	0	0	0	0	0
Pharmacology	46	39	0	1	0	1	0	5
Physiology	38	30	0	0	0	2	0	6
Zoology	0	0	0	0	0	0	0	0
Biosciences, n.e.c.	49	41	0	1	0	5	0	2
Psychology	611	399	0	6	4	160	1	41
Social sciences, total	1,321	1,095	2	5	8	118	11	82
Agricultural economics	27	23	0	0	0	0	0	4
Anthropology (cultural & social)	0	0	0	0	0	0	0	0
Economics (except agricultural)	52	24	0	2	1	0	0	25
Geography	0	0	0	0	0	0	0	0
Linguistics	0	0	0	0	0	0	0	0
Political science	727	610	0	3	3	72	6	33
Sociology	218	204	1	0	3	6	1	3
Sociology/anthropology	68	50	0	0	0	4	1	13
Social sciences, other	229	184	1	0	1	36	3	4
Engineering, total	575	283	2	32	8	60	32	158
Aerospace engineering	0	0	0	0	0	0	0	0
Agricultural engineering	0	0	0	0	0	0	0	0
Biomedical engineering	0	0	0	0	0	0	0	0
Chemical engineering	33	14	0	0	0	1	0	18
Civil engineering	83	37	2	8	5	19	6	6
Electrical engineering	120	64	0	0	1	5	21	29
Engineering science	0	0	0	0	0	0	0	0
Industrial/manufacturing eng.	54	37	0	9	1	4	3	0
Mechanical engineering	139	74	0	5	1	11	2	46
Metallurgical/materials eng.	0	0	0	0	0	0	0	0
Nuclear engineering	0	0	0	0	0	0	0	0
Engineering, other	146	57	0	10	0	20	0	59

See explanatory information, if any, and SOURCE at end of table.

**Table 50. Graduate students in science, engineering, and health fields in historically black colleges
and universities, by detailed field, citizenship, and racial/ethnic
background of U.S. citizens or permanent residents: 1998**

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Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non- Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non- Hispanic	Other or unknown	
Total, health fields	864	446	9	32	14	329	12	22
Clinical fields	103	15	0	1	1	85	0	1
Dental sciences	0	0	0	0	0	0	0	0
Nursing	122	80	0	2	1	36	1	2
Pharmaceutical sciences	127	88	0	15	3	10	7	4
Preventive medicine/community health	31	25	0	0	0	6	0	0
Speech pathology/audiology	361	187	9	7	7	132	4	15
Veterinary sciences	18	15	0	3	0	0	0	0
Other health fields	102	36	0	4	2	60	0	0

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 51. Graduate students in science and engineering fields in historically black colleges and universities, by geographic distribution, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

Page 1 of 2

Geographic distribution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions	4,458	3,060	9	146	44	491	129	579
New England	0	0	0	0	0	0	0	0
Connecticut	0	0	0	0	0	0	0	0
Maine	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	0	0	0	0	0
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	0
Vermont	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0
Pennsylvania	0	0	0	0	0	0	0	0
East North Central	0	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0	0
Indiana	0	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	0	0
Ohio	0	0	0	0	0	0	0	0
Wisconsin	0	0	0	0	0	0	0	0
West North Central	19	7	0	0	1	10	1	0
Iowa	0	0	0	0	0	0	0	0
Kansas	0	0	0	0	0	0	0	0
Minnesota	0	0	0	0	0	0	0	0
Missouri	19	7	0	0	1	10	1	0
Nebraska	0	0	0	0	0	0	0	0
North Dakota	0	0	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0	0	0
South Atlantic	2,423	1,662	9	104	26	201	94	327
Delaware	30	14	0	1	0	12	0	3
District of Columbia	595	431	0	24	3	15	13	109
Florida	218	145	2	5	6	28	32	0
Georgia	335	289	0	8	5	3	12	18
Maryland	238	114	0	1	4	40	1	78
North Carolina	806	549	6	56	7	84	29	75
South Carolina	0	0	0	0	0	0	0	0
Virginia	201	120	1	9	1	19	7	44
West Virginia	0	0	0	0	0	0	0	0
East South Central	1,150	696	0	37	9	200	9	199
Alabama	273	166	0	5	4	10	6	82
Kentucky	0	0	0	0	0	0	0	0
Mississippi	313	224	0	13	0	23	0	53
Tennessee	564	306	0	19	5	167	3	64
West South Central	866	695	0	5	8	80	25	53
Arkansas	0	0	0	0	0	0	0	0
Louisiana	443	337	0	0	0	71	24	11
Oklahoma	0	0	0	0	0	0	0	0
Texas	423	358	0	5	8	9	1	42

See explanatory information, if any, and SOURCE at end of table.

Table 51. Graduate students in science and engineering fields in historically black colleges and universities, by geographic distribution, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998

Page 2 of 2

Geographic distribution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Mountain	0	0	0	0	0	0	0	0
Arizona	0	0	0	0	0	0	0	0
Colorado	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0	0
Montana	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0	0
Wyoming	0	0	0	0	0	0	0	0
Pacific	0	0	0	0	0	0	0	0
Alaska	0	0	0	0	0	0	0	0
California	0	0	0	0	0	0	0	0
Hawaii	0	0	0	0	0	0	0	0
Oregon	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0
Outlying areas	0	0	0	0	0	0	0	0

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 52. Non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field: 1991-1998

Field	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Total, all black students								
Total, all surveyed fields	16,407	18,487	20,439	21,177	22,154	22,976	23,571	24,249
Total, science and engineering fields	13,691	15,445	17,118	17,611	18,283	19,071	19,352	19,653
Sciences, total	11,666	13,071	14,559	14,827	15,427	16,176	16,477	16,826
Physical sciences	699	807	843	856	897	986	952	910
Earth, atmos., and ocean sciences	141	202	227	203	219	223	206	206
Mathematical sciences	524	579	710	673	689	711	657	613
Computer sciences	1,093	1,108	1,168	1,182	1,155	1,278	1,302	1,352
Agricultural sciences	145	209	235	239	294	268	229	310
Biological sciences	1,317	1,493	1,737	1,709	1,879	2,010	2,171	2,186
Psychology	2,455	2,758	3,284	3,529	3,359	3,455	3,647	3,845
Social sciences	5,292	5,915	6,355	6,436	6,935	7,245	7,313	7,404
Engineering	2,025	2,374	2,559	2,784	2,856	2,895	2,875	2,827
Health fields	2,716	3,042	3,321	3,566	3,871	3,905	4,219	4,596
Black students in HBCUs								
Total, all surveyed fields	2,090	2,232	2,627	2,982	3,189	3,384	3,632	3,506
Total, science and engineering fields	1,959	2,075	2,433	2,768	2,906	3,174	3,279	3,060
Sciences, total	1,816	1,898	2,221	2,515	2,612	2,883	2,995	2,777
Physical sciences	190	179	211	231	253	279	286	229
Earth, atmos., and ocean sciences	24	30	42	30	38	34	43	40
Mathematical sciences	107	111	169	155	139	157	128	107
Computer sciences	189	200	190	227	210	217	219	200
Agricultural sciences	37	70	84	102	130	111	88	137
Biological sciences	278	306	403	453	492	543	593	570
Psychology	317	352	428	489	413	430	490	399
Social sciences	674	650	694	828	937	1,112	1,148	1,095
Engineering	143	177	212	253	294	291	284	283
Health fields	131	157	194	214	283	210	353	446
Percent in HBCUs								
Total, all surveyed fields	12.7	12.1	12.9	14.1	14.4	14.7	15.4	14.5
Total, science and engineering fields	14.3	13.4	14.3	15.7	15.9	16.6	16.9	15.6
Sciences, total	15.6	14.5	15.4	17.0	16.9	17.8	18.2	16.5
Physical sciences	27.2	22.2	24.9	27.0	28.2	28.3	30.0	25.2
Earth, atmos., and ocean sciences	17.0	14.9	18.5	14.8	17.4	15.2	20.9	19.4
Mathematical sciences	20.4	19.2	25.9	23.0	20.2	22.1	19.5	17.5
Computer sciences	17.3	18.1	16.3	19.2	18.2	17.0	16.8	14.8
Agricultural sciences	25.5	33.5	41.0	42.7	44.2	41.4	38.4	44.2
Biological sciences	21.1	20.5	23.1	26.5	26.2	27.0	27.3	26.1
Psychology	12.9	12.8	12.8	13.9	12.3	12.4	13.4	10.4
Social sciences	12.7	11.0	10.9	12.9	13.5	15.3	15.7	14.8
Engineering	7.1	7.5	8.2	9.1	10.3	10.1	9.9	10.0
Health fields	4.8	5.2	5.8	6.0	7.3	5.4	8.4	9.7

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 53. Non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field and sex: 1994-1998

Field	Men					Women				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total, all black students										
Total, all surveyed fields	8,669	8,934	8,974	9,121	9,262	12,508	13,220	14,002	14,450	14,987
Total, science and engineering fields	8,049	8,211	8,253	8,337	8,347	9,562	10,072	10,818	11,015	11,306
Sciences, total	6,082	6,254	6,301	6,377	6,406	8,745	9,173	9,875	10,100	10,420
Physical sciences	497	529	550	508	479	359	368	436	444	431
Earth, atmospheric, and ocean sciences	118	117	116	105	105	85	102	107	101	101
Mathematical sciences	343	385	368	347	339	330	304	343	310	274
Computer sciences	696	652	718	767	768	486	503	560	535	584
Agricultural sciences	118	150	131	105	147	121	144	137	124	163
Biological sciences	671	691	725	783	791	1,038	1,188	1,285	1,388	1,395
Psychology	851	817	810	910	920	2,678	2,542	2,645	2,737	2,925
Social sciences	2,788	2,913	2,883	2,852	2,857	3,648	4,022	4,362	4,461	4,547
Engineering	1,967	1,957	1,952	1,960	1,941	817	899	943	915	886
Health fields	620	723	721	784	915	2,946	3,148	3,184	3,435	3,681
Black students in HBCUs										
Total, all surveyed fields	1,265	1,331	1,383	1,462	1,332	1,717	1,858	2,001	2,170	2,174
Total, science and engineering fields	1,226	1,273	1,343	1,396	1,229	1,542	1,633	1,831	1,883	1,831
Sciences, total	1,048	1,078	1,152	1,201	1,039	1,467	1,534	1,731	1,794	1,738
Physical sciences	127	145	161	151	114	104	108	118	135	115
Earth, atmospheric, and ocean sciences	12	16	14	17	20	18	22	20	26	20
Mathematical sciences	69	79	80	71	57	86	60	77	57	50
Computer sciences	125	92	105	117	108	102	118	112	102	92
Agricultural sciences	42	57	54	42	60	60	73	57	46	77
Biological sciences	187	194	202	218	186	266	298	341	375	384
Psychology	132	114	108	171	97	357	299	322	319	302
Social sciences	354	381	428	414	397	474	556	684	734	698
Engineering	178	195	191	195	190	75	99	100	89	93
Health fields	39	58	40	66	103	175	225	170	287	343
Percent in HBCUs										
Total, all surveyed fields	14.6	14.9	15.4	16.0	14.4	13.7	14.1	14.3	15.0	14.5
Total, science and engineering fields	15.2	15.5	16.3	16.7	14.7	16.1	16.2	16.9	17.1	16.2
Sciences, total	17.2	17.2	18.3	18.8	16.2	16.8	16.7	17.5	17.8	16.7
Physical sciences	25.6	27.4	29.3	29.7	23.8	29.0	29.3	27.1	30.4	26.7
Earth, atmospheric, and ocean sciences	10.2	13.7	12.1	16.2	19.0	21.2	21.6	18.7	25.7	19.8
Mathematical sciences	20.1	20.5	21.7	20.5	16.8	26.1	19.7	22.4	18.4	18.2
Computer sciences	18.0	14.1	14.6	15.3	14.1	21.0	23.5	20.0	19.1	15.8
Agricultural sciences	35.6	38.0	41.2	40.0	40.8	49.6	50.7	41.6	37.1	47.2
Biological sciences	27.9	28.1	27.9	27.8	23.5	25.6	25.1	26.5	27.0	27.5
Psychology	15.5	14.0	13.3	18.8	10.5	13.3	11.8	12.2	11.7	10.3
Social sciences	12.7	13.1	14.8	14.5	13.9	13.0	13.8	15.7	16.5	15.4
Engineering	9.0	10.0	9.8	9.9	9.8	9.2	11.0	10.6	9.7	10.5
Health fields	6.3	8.0	5.5	8.4	11.3	5.9	7.1	5.3	8.4	9.3

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 54. Full-time non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field: 1991-1998

Field	1991	1992 ¹	1993 ¹	1994 ¹	1995 ¹	1996 ¹	1997 ¹	1998 ¹
Total, all black students								
Total, all surveyed fields	8,863	10,219	11,387	11,965	12,501	12,989	13,570	13,743
Total, science and engineering fields	7,692	8,904	9,903	10,343	10,668	10,986	11,411	11,264
Sciences, total	6,552	7,545	8,413	8,640	8,978	9,323	9,739	9,679
Physical sciences	529	630	690	709	729	769	741	725
Earth, atmos., and ocean sciences	97	128	142	129	136	130	138	136
Mathematical sciences	276	331	411	412	423	422	386	355
Computer sciences	446	411	460	465	485	475	494	469
Agricultural sciences	113	163	162	162	227	194	176	207
Biological sciences	997	1,119	1,348	1,369	1,450	1,513	1,734	1,663
Psychology	1,424	1,656	1,854	2,046	2,028	2,087	2,224	2,424
Social sciences	2,670	3,107	3,346	3,348	3,500	3,733	3,846	3,700
Engineering	1,140	1,359	1,490	1,703	1,690	1,663	1,672	1,585
Health fields	1,171	1,315	1,484	1,622	1,833	2,003	2,159	2,479
Black students in HBCUs								
Total, all surveyed fields	1,234	1,289	1,604	1,951	2,004	2,086	2,308	2,147
Total, science and engineering fields	1,158	1,201	1,484	1,807	1,841	1,954	2,070	1,834
Sciences, total	1,046	1,075	1,300	1,588	1,591	1,735	1,849	1,628
Physical sciences	136	130	178	188	198	217	215	185
Earth, atmos., and ocean sciences	12	11	24	15	8	9	22	17
Mathematical sciences	58	62	106	98	89	99	79	67
Computer sciences	93	90	93	113	92	90	114	81
Agricultural sciences	24	57	32	46	92	67	69	98
Biological sciences	212	228	333	375	380	419	470	413
Psychology	138	145	193	284	262	259	287	254
Social sciences	373	352	341	469	470	575	593	513
Engineering	112	126	184	219	250	219	221	206
Health fields	76	88	120	144	163	132	238	313
Percent in HBCUs								
Total, all surveyed fields	13.9	12.6	14.2	16.3	16.0	16.1	17.0	15.6
Total, science and engineering fields	15.1	13.5	15.2	17.5	17.3	17.8	18.1	16.3
Sciences, total	16.0	14.2	15.7	18.4	17.7	18.6	19.0	16.8
Physical sciences	25.7	20.6	25.6	26.5	27.2	28.2	29.0	25.5
Earth, atmos., and ocean sciences	12.4	8.6	16.9	11.6	5.9	6.9	15.9	12.5
Mathematical sciences	21.0	18.7	29.2	23.8	21.0	23.5	20.5	18.9
Computer sciences	20.9	21.9	20.2	24.3	19.0	18.9	23.1	17.3
Agricultural sciences	21.2	35.0	26.1	28.4	40.5	34.5	39.2	47.3
Biological sciences	21.3	20.4	24.6	27.4	26.2	27.7	27.1	24.8
Psychology	9.7	8.8	10.2	13.9	12.9	12.4	12.9	10.5
Social sciences	14.0	11.3	10.1	14.0	13.4	15.4	15.4	13.9
Engineering	9.8	9.3	12.2	12.9	14.8	13.2	13.2	13.0
Health fields	6.5	6.7	8.1	8.9	8.9	6.6	11.0	12.6

¹ For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 55. Full-time non-Hispanic black U.S. citizen or permanent resident graduate students
in science, engineering, and health fields in all institutions and historically black
colleges and universities, by field and sex: 1994-1998**

Field	Men					Women				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total, all black students										
Total, all surveyed fields	5,114	5,212	5,245	5,382	5,322	6,851	7,289	7,744	8,188	8,421
Total, science and engineering fields	4,772	4,807	4,786	4,902	4,747	5,571	5,861	6,200	6,509	6,517
Sciences, total	3,607	3,691	3,695	3,787	3,712	5,033	5,287	5,628	5,952	5,967
Physical sciences	409	434	441	393	388	300	295	328	348	337
Earth, atmospheric, and ocean sciences	79	78	68	71	67	50	58	62	67	69
Mathematical sciences	208	242	221	208	206	204	181	201	178	149
Computer sciences	283	285	281	309	267	182	200	194	185	202
Agricultural sciences	82	105	83	83	88	80	122	111	93	119
Biological sciences	546	543	562	636	618	823	907	951	1,098	1,045
Psychology	507	489	497	541	590	1,539	1,539	1,590	1,683	1,834
Social sciences	1,493	1,515	1,542	1,546	1,488	1,855	1,985	2,191	2,300	2,212
Engineering	1,165	1,116	1,091	1,115	1,035	538	574	572	557	550
Health fields	342	405	459	480	575	1,280	1,428	1,544	1,679	1,904
Black students in HBCUs										
Total, all surveyed fields	867	848	865	941	820	1,084	1,156	1,221	1,367	1,327
Total, science and engineering fields	838	825	846	905	751	969	1,016	1,108	1,165	1,083
Sciences, total	683	662	707	755	606	905	929	1,028	1,094	1,022
Physical sciences	105	117	129	113	96	83	81	88	102	89
Earth, atmospheric, and ocean sciences	8	6	5	9	8	7	2	4	13	9
Mathematical sciences	39	51	51	45	41	59	38	48	34	26
Computer sciences	64	40	52	70	42	49	52	38	44	39
Agricultural sciences	23	35	30	34	38	23	57	37	35	60
Biological sciences	157	148	158	179	134	218	232	261	291	279
Psychology	72	63	58	77	63	212	199	201	210	191
Social sciences	215	202	224	228	184	254	268	351	365	329
Engineering	155	163	139	150	145	64	87	80	71	61
Health fields	29	23	19	36	69	115	140	113	202	244
Percent in HBCUs										
Total, all surveyed fields	17.0	16.3	16.5	17.5	15.4	15.8	15.9	15.8	16.7	15.8
Total, science and engineering fields	17.6	17.2	17.7	18.5	15.8	17.4	17.3	17.9	17.9	16.6
Sciences, total	18.9	17.9	19.1	19.9	16.3	18.0	17.6	18.3	18.4	17.1
Physical sciences	25.7	27.0	29.3	28.8	24.7	27.7	27.5	26.8	29.3	26.4
Earth, atmospheric, and ocean sciences	10.1	7.7	7.4	12.7	11.9	14.0	3.4	6.5	19.4	13.0
Mathematical sciences	18.8	21.1	23.1	21.6	19.9	28.9	21.0	23.9	19.1	17.4
Computer sciences	22.6	14.0	18.5	22.7	15.7	26.9	26.0	19.6	23.8	19.3
Agricultural sciences	28.0	33.3	36.1	41.0	43.2	28.7	46.7	33.3	37.6	50.4
Biological sciences	28.8	27.3	28.1	28.1	21.7	26.5	25.6	27.4	26.5	26.7
Psychology	14.2	12.9	11.7	14.2	10.7	13.8	12.9	12.6	12.5	10.4
Social sciences	14.4	13.3	14.5	14.7	12.4	13.7	13.5	16.0	15.9	14.9
Engineering	13.3	14.6	12.7	13.5	14.0	11.9	15.2	14.0	12.7	11.1
Health fields	8.5	5.7	4.1	7.5	12.0	9.0	9.8	7.3	12.0	12.8

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

Technical Table 8. Comparison of graduate enrollment data as originally published and as modified through the fall 1998 graduate student survey cycle: 1975-1998

Page 2 of 2

Year	Total, all institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	Percent change	Original total	Revised total	Percent change	Original total	Revised total	Percent change
Part-time									
1975 ¹	108,527	108,863	0.3	80,021	88,224	10.3	28,506	20,639	-27.6
1976	112,231	110,309	-1.7	81,925	88,628	8.2	30,306	21,681	-28.5
1977	124,776	118,640	-4.9	88,484	94,420	6.7	36,292	24,220	-33.3
1978 ²	N/A	116,882	N/A	94,394	91,656	-2.9	N/A	25,226	N/A
1979	131,936	125,819	-4.6	97,713	99,540	1.9	34,223	26,279	-23.2
1980	134,099	128,663	-4.1	103,057	102,888	-.2	31,042	25,775	-17.0
1981	138,606	133,082	-4.0	105,674	105,747	.1	32,932	27,335	-17.0
1982	143,723	137,538	-4.3	109,738	109,177	-.5	33,985	28,361	-16.5
1983	149,764	138,419	-7.6	114,630	110,071	-4.0	35,134	28,348	-19.3
1984 ³	150,918	140,748	-6.7	116,622	111,353	-4.5	34,296	29,395	-14.3
1985 ³	165,517	146,734	-11.3	121,386	117,106	-3.5	44,131	29,628	-32.9
1986 ³	166,867	149,360	-10.5	124,223	118,990	-4.2	42,644	30,370	-28.8
1987 ³	164,385	150,446	-8.5	123,819	119,960	-3.1	40,566	30,486	-24.8
1988	156,976	149,419	-4.8	123,298	120,263	-2.5	33,678	29,156	-13.4
1989	154,364	151,848	-1.6	117,471	120,538	2.6	36,893	31,310	-15.1
1990	163,107	159,348	-2.3	123,143	125,555	2.0	39,964	33,793	-15.4
1991	167,022	164,222	-1.7	124,540	128,396	3.1	42,482	35,826	-15.7
1992	171,998	171,023	-.6	128,039	133,470	4.2	43,959	37,553	-14.6
1993	176,429	174,770	-.9	133,694	135,562	1.4	42,735	39,208	-8.3
1994	174,657	172,413	-1.3	133,516	134,276	.6	41,141	38,137	-7.3
1995	171,275	170,584	-.4	130,676	132,181	1.2	40,599	38,403	-5.4
1996	166,158	165,766	-.2	127,045	128,092	.8	39,113	37,674	-3.7
1997	160,262	160,322	.0	123,077	123,694	-.5	37,185	36,628	-1.5
1998	158,145	N/A	N/A	121,290	N/A	N/A	36,855	N/A	N/A

¹ The 1976 survey also collected 1975 data from master's-granting institutions.

² Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

³ These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See "Technical Notes" for further information.

NOTE: The percent change column is presented as a measure of retroactive changes in survey definitions. Three survey changes in the late 1980s and early 1990s had a retroactive effect on figures reported for earlier years. First, degree-granting status (doctorate or master's) used to be determined by an institution's status each year. Beginning in 1992, degree-granting status was determined by the status reported in the latest survey year. This change shifted numerous institutions (and students) from master's-granting to doctorate-granting categories for years before 1992. Second, in 1988 guidelines to determine S&E departments were tightened. This change meant retroactively dropping departments in fields like educational psychology, social work, and cultural studies from the survey population. Third, improved estimates were generated for years in which enrollments at master's-granting institutions were sampled (1984-87).

KEY: N/A = Not available

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

INSTRUCTIONS

FOR THE NSF-NIH SURVEY OF GRADUATE STUDENTS AND POSTDOCTORATES IN SCIENCE AND ENGINEERING, FALL 1998

PURPOSE OF THE SURVEY

The survey provides a comprehensive picture of the training of future scientists and engineers in the Nation's graduate schools. Data are used by Congress and the executive branch during budget preparation, and by State government agencies and other analysts to assess the future supply of science and engineering (S&E) personnel.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information provided will be used for statistical purposes only. Response is entirely voluntary and failure to provide some or all of the information will in no way adversely affect your institution.

The average time required for questionnaire completion is 2 hours. Response burden comments should be directed to Mary Lou Higgs at (703) 306-1125, ext. 2063.

Students Included in This Survey

Count as graduate students persons enrolled **for credit** in any S&E master's or Ph.D. degree program in fall 1998. Report M.D., D.O., D.V.M., or D.D.S. candidates, interns, and residents in items 5 through 7 **only** if they are concurrently working for an S&E master's or Ph.D. degree or are enrolled in a joint medical/Ph.D. program. Individuals who already hold graduate or medical degrees and are working on another master's or Ph.D. degree are considered graduate students (items 5 through 7), not postdoctorates (item 8).

Include S&E students performing thesis or dissertation research away from the campus (for example, at Government- and contractor-owned facilities) in the United States as long as they are enrolled for credit in an advanced-degree program.

All data should be reported in terms of headcounts, not full-time equivalents (FTEs).

Students Excluded From This Survey

Exclude students enrolled in a foreign country (at a branch or extension center), and non-matriculated students.

Students Enrolled in Multiple Departments/Institutions

A student should be reported in only **one** department. Students enrolled in interdisciplinary/interinstitutional programs should be counted only once, by their "home" department and institution.

INCOMPLETEDATA

Please write "unavailable" or "unknown" in data cells as applicable. On this form, "N/A" means "not applicable." Data cells left blank are presumed to be zeroes.

ITEM 5: FULL-TIME STUDENTS

Report the total number of full-time degree-seeking students in line (6), column (L). Then, in lines (1) through (6), count each full-time student **only once by largest** source of support so that all columns and rows in item 5 sum to the full-time total in line (6), column (L). In item 5, count only graduate students pursuing an S&E degree according to a full-time schedule; this may include any combination of study, teaching, and research, depending on your institution's policy and definition of full-time status. For example, many institutions base full-time status on the number of credit hours taken; others calculate full-time according to the amount of fees paid by the student.

Mechanisms of Support—Lines (1) Through (5)

A **fellowship**, line (1), is any competitive award (often from a national competition) made to a student that requires no work of the recipient. A **traineeship**, line (2), is an educational award given to a student selected by the institution. An **assistantship** should be classified as **research**, line (3), or **teaching**, line (4), depending on assigned duties; e.g., a student devoting most of his or her time to teaching should be reported on line (4). All other full-time students, including members of the Armed Forces whose tuition is paid by the Department of Defense, and self-supported students, should be reported on line (5).

Federal Sources of Support—Columns (A) Through (G)

Department of Defense (DoD)—Column (A): Sources include the Departments of the Army, Navy, or Air Force, as well as programs within the Office of the Secretary of Defense. Students receiving their main support from the Veterans Administration under the G.I. Bill should be reported under column (F), "Other Federal sources."

Department of Health and Human Services (HHS)—Columns (B) and (C): Report students with support from the institutes or divisions of the National Institutes of Health (NIH) under column (B); report support from all other components of HHS in column (C). Refer to the organizational roster under "Definitions."

National Science Foundation (NSF)—Column (D): Report students receiving NSF graduate fellowships and minority fellowships, as well as those supported under NSF research grants.

U.S. Department of Agriculture (USDA)—Column (E): Include research assistants working on projects financed out

of Hatch, McIntyre-Stennis, or Smith-Lever formula funds, competitive research grants, and institution fellowship/training grants.

National Aeronautics and Space Administration (NASA)—Column (F): Report students with support from this agency.

Other Federal sources—Column (G): Report students receiving support from Federal agencies other than those listed in columns (A) through (F), such as the Fulbright program, the G.I. Bill, and Department of Education and Department of Energy programs. Students primarily supported by Federal loans should be reported in column (K), "Self-supported students."

Non-Federal Sources of Support—Cols. (H) Through (J)

Institutional support—Column (H): Report students supported from YOUR institution, including those receiving tuition waivers. State and local government support should also be reported in this column. Students primarily supported with funds from the Federal Government, such as training grants, however, should be reported under the appropriate Federal agency.

Foreign sources—Column (I): Report students supported from any non-U.S. source, such as foreign governments, industrial firms, or specialized agencies of the United Nations.

Other U.S. sources—Column (J): Report students supported from nonprofit institutions, private industry, and all other non-Federal U.S. sources not included in columns (H) or (I).

Self-supported students—Column (K): Report both foreign and U.S. citizen students whose largest source of support comes from ANY loans (including Federal loans) or from personal or family financial contributions. **These students must be included in the full-time total, line (6), column (L).**

Women—Line (7)

Report all full-time female students by the source of their primary support. The total number of full-time women should be reported in line (7), column (L).

In each column, data on line (7) should not exceed the total on line (6).

First-Time Full-Time Students—Lines (8) and (9)

A first-time student has enrolled in the program in which he or she is pursuing a degree as of the beginning of the fall term in 1998. All other students should be considered to be beyond their first time of enrollment.

ITEM 6: PART-TIME STUDENTS

Report all part-time students in item 6, regardless of their source of support. Part-time students are pursuing an S&E graduate degree but NOT on a full-time schedule. Consider students part-time according to your own institution's definition of part-time status.

ITEM 7: CITIZENSHIP AND RACIAL/ETHNIC BACKGROUND OF U.S. CITIZENS AND PERMANENT RESIDENTS

Report all U.S. citizens and permanent residents in columns (A) through (G), and count each student only once according to his or her racial/ethnic category as defined by the Bureau of the Census, listed under "Definitions."

Count foreign students, i.e., those holding temporary visas, only **once** in column (H), regardless of race/ethnicity. Native residents of a U.S. possession and applicants for U.S. citizenship holding green cards, however, should be reported as U.S. citizens.

Total full-time and part-time enrollments reported in item 7 should match those reported in items 5 and 6, respectively.

ITEM 8: POSTDOCTORATES AND NONFACULTY RESEARCH STAFF WITH DOCTORATES

Postdoctorates—Columns (A) through (F): Include individuals with science and engineering Ph.D.'s, M.D.'s, D.D.S.'s, or D.V.M.'s (including foreign degrees equivalent to U.S. doctorates) who devote their **primary effort to their own research training through research activities or study** in the department under temporary appointments carrying no academic rank. These individuals may contribute to the academic program through seminars, lectures, or working with graduate students. Such postdoctorates may have different titles at different institutions, e.g., "Postdoctoral Scholar," "Research Associate," "Postdoctoral Fellow," or "Postgraduate Researcher." Exclude, however, clinical fellows and those with appointments in residency training programs in medical and health professions, **unless research training under the supervision of a senior mentor is the primary purpose of the appointment.**

Report postdoctorates by source of support in columns (A) through (D), with the total number of postdoctorates reported in column (E). Of this total, report the number who are foreign in column (F).

Other non-faculty research staff with doctorates—

Column (G): Include all doctoral scientists and engineers who are involved principally in research activities but are not considered either postdoctoral appointees or members of the regular faculty.

On line (2), report the number of women in each category. On line (3), report those postdoctorates and nonfaculty research staff who hold first professional medical degrees (M.D., D.O., D.D.S., D.V.M.). Please note that in each column, data on lines (2) and (3) should not exceed the total on line (1).

DEFINITIONS

(1) NATIONAL INSTITUTES OF HEALTH ORGANIZATIONAL ROSTER

—Item 5, column (B)

Fogarty International Center
National Cancer Institute
National Center for Human Genome Research
National Center for Nursing Research
National Center for Research Resources
National Eye Institute
National Heart, Lung, and Blood Institute
National Institute of Arthritis and Musculoskeletal and Skin Diseases
National Institute of Child Health and Human Development
National Institute of Dental Research
National Institute of Diabetes and Digestive and Kidney Diseases
National Institute of Environmental Health Sciences
National Institute of General Medical Sciences
National Institute of Mental Health
National Institute of Neurological Disorders and Stroke

FOR FURTHER INFORMATION . . .

If you have any questions about this survey, please contact Ms. Toni Picker or Dr. Atessa Shahmirzadi of Quantum Research Corporation by telephone at (301) 657-3077, exts. 294 or 140 respectively, or by e-mail at gss@qrc.com.

National Institute on Aging

National Institute on Alcohol Abuse and Alcoholism

National Institute of Allergy and Infectious Diseases

National Institute on Deafness and Other

Communication Disorders

National Institute on Drug Abuse

National Library of Medicine

(2) OTHER HHS ADMINISTRATIVE UNITS

—Item 5, column (C)

Substance Abuse and Mental Health Services Administration
(Please note that the former Alcohol, Drug Abuse and Mental Health Administration institutes are now part of the National Institutes of Health.)

Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health

Food and Drug Administration

Health Resources and Services Administration

(3) RACIAL/ETHNIC CATEGORIES FOR U.S. CITIZENS AND PERMANENT RESIDENTS DEFINED BY THE BUREAU OF THE CENSUS

—Item 7

Black, non-Hispanic: Persons having origins in any of the black racial groups (except those of Hispanic origin).

American Indian or Alaskan native: Persons having origins in any of the original peoples of North America.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. These areas include China, Japan, Korea, the Philippine Islands, and Samoa.

Hispanic: Persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White, non-Hispanic: Persons having origins in any of the original peoples of Europe, North Africa, or the Middle East, except those of Hispanic origin.

UPON COMPLETING THIS FORM, PLEASE RETURN IT TO YOUR SURVEY COORDINATOR FOR TRANSMITTAL BY JANUARY 31, 1999.

**NATIONAL SCIENCE FOUNDATION and NATIONAL INSTITUTES OF HEALTH
Survey of Graduate Students and Postdoctorates in Science and Engineering, Fall 1998**

DEPARTMENT OR PROGRAM DATA SHEET

Due date: January 31, 1999

ITEMS 1-4. IDENTIFYING INFORMATION

1. Institution name: _____

2. Name of S&E department or program: _____

If changed since last year, please indicate previous name and whether this represents a merger, split, or expanded program: _____

4. Highest graduate degree available in this department or program (CHECK ONE): (1) Ph.D.¹ (2) Master's (3) No Ph.D.¹ or master's degree offered

**Institution and
department code
(LEAVE BLANK)**

3. Person in department or program preparing this form:

Name: _____

Title: _____

Phone: (_____) _____

E-mail address: _____

Report all data on a headcount basis (use whole numbers, *not* fractions, decimals, FTEs, etc.). If your department does not enroll graduate students, please go to item 8.

ITEM 5. NUMBER OF FULL-TIME GRADUATE STUDENTS enrolled for advanced degrees (master's and doctoral) in fall 1998. Report each student **only once** according to the source and mechanism of the **largest amount of support** received in fall 1998.

Students receiving equal support from multiple sources or through multiple mechanisms should be reported only once. When determining the largest source of support, consider all graduate school academic expenses including tuition, tuition remission, and stipends.

MECHANISMS OF SUPPORT	STUDENTS RECEIVING FINANCIAL ASSISTANCE										SELF-SUPPORTED STUDENTS (including loans and family sources) (K)	TOTAL FULL-TIME GRADUATE ENROLLMENT (Sum of (A) through (K)) (L)	
	FEDERAL SOURCES (excluding loans)						NON-FEDERAL SOURCES						
	Line	Department of Defense (A)	National Institutes of Health (B)	Other HHS (C)	National Science Foundation (D)	Department of Agriculture (E)	NASA (F)	Other Federal sources (G)	Institutional support (including State & local government) (H)	Foreign sources (I)	Other U.S. sources (J)		
Graduate Fellowships	(1)												
Graduate Traineeships	(2)												
Graduate Research Assistantships	(3)												
Graduate Teaching Assistantships	(4)												
Other Types of Support	(5)												
FULL-TIME TOTAL²	(6)												
Of the students in line (6), how many in each data cell are WOMEN? ³	(7)												
First-Time Full-Time Students	(8)	Of the full-time students on line (6), column (L), how many are FIRST-TIME? (Should not exceed total in line (6), column (L))											
First-Time Full-Time Women Students	(9)	Of the first-time students on line (8), how many are WOMEN?											

¹ Or Ph.D. equivalent such as Sc.D. and D.Eng., but not Ed.D., M.D., or other professional degree

² The total from line (6) should be inserted in item 7, line (3), column (I).

³ The total from line (7) should be inserted in item 7, line (2), column (I).

ITEM 6. NUMBER OF PART-TIME GRADUATE STUDENTS enrolled for advanced degrees (master's and Ph.D.) in fall 1998.

PART-TIME TOTAL (The total from line (1) should be inserted below in item 7, line (6), column (I).)	(1)	
Of the part-time students on line (1), how many are WOMEN? (The total from line (2) should be inserted below in item 7, line (5), column (I).)	(2)	

ITEM 7. RACE/ETHNICITY of FULL-TIME (Item 5) and PART-TIME (Item 6) graduate students in fall 1998, by sex.	Of the student totals in items 5 and 6, how many belong to the following RACIAL/ETHNIC categories? In each line, count each student only once.	U.S. CITIZENS AND PERMANENT RESIDENTS							FOREIGN: temporary visa holders (H)	TOTAL (Sum of (A) through (H)) (I)
		Black non- Hispanic (A)	Amer. Indian/ Alaskan Native (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non- Hispanic (E)	Other (F)	Unknown or declined to state (G)		
	MEN ENROLLED FULL TIME	(1)								
	WOMEN ENROLLED FULL TIME (column (I) should equal item 5, line (7), column (L))	(2)								
	FULL TIME, TOTAL (column (I) should equal item 5, line (6), column (L))	(3)								
	MEN ENROLLED PART TIME	(4)								
	WOMEN ENROLLED PART TIME (column (I) should equal item 6, line (2))	(5)								
	PART TIME, TOTAL (column (I) should equal item 6, line (1))	(6)								

ITEM 8. NUMBER OF POSTDOCTORATES AND NON-FACULTY RESEARCH STAFF WITH DOCTORATES in fall 1997.	POSTDOCTORATES							OTHER NON- FACULTY RESEARCH STAFF WITH DOCTORATES (G)				
	SOURCE OF SUPPORT			NON- FEDERAL (D)	TOTAL for all sources (A) through (D) (E)		Of the total in (E), how many are FOREIGN? (F)					
	FEDERAL											
	Fellowships (A)	Traineeships (B)	Research grants (C)									
TOTAL	(1)											
Of the total in each cell of line (1), how many are WOMEN?	(2)											
Of the total in each cell of line (1), how many hold an M.D., D.O., D.D.S., or D.V.M. degree?	(3)											

Approximately how many personhours were required to complete this form?

Please explain variances from the previous year's data or include other comments:

List other Federal sources (agencies), from item 5, column (G), and
number of full-time students supported by each:



This questionnaire has been printed on recycled paper.

Survey of Graduate Students and Postdoctorates in Science and Engineering
CROSSWALK BETWEEN NSF DISCIPLINE CODES AND
THE NCES CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

The following set of discipline codes categorizes the science and engineering departments or programs in the Survey of Graduate Students and Postdoctorates in Science and Engineering. Representative department names are shown under each of the discipline codes.

ENGINEERING		EARTH, ATMOSPHERIC, AND OCEAN SCIENCES	
101 AEROSPACE ENGINEERING	14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL ENGR.	301 ATMOSPHERIC SCIENCES	40.04 ATMOSPHERIC SCIENCES AND METEOROLOGY
102 AGRICULTURAL ENGINEERING	14.03 AGRICULTURAL ENGINEERING	302 GEOSCIENCES	40.06 GEOLOGICAL AND RELATED SCIENCES 40.0703 EARTH AND PLANETARY SCIENCES
103 BIOMEDICAL ENGINEERING	14.05 BIOENGINEERING AND BIOMEDICAL ENGINEERING	303 OCEAN SCIENCES	26.0607 MARINE/AQUATIC BIOLOGY 40.0702 OCEANOGRAPHY
104 CHEMICAL ENGINEERING	03.0509 WOOD SCIENCE 14.07 CHEMICAL ENGINEERING 14.32 POLYMER/PLASTICS ENGINEERING	304 EARTH, ATMOSPHERIC, AND OCEAN SCIENCES, N.E.C.	
105 CIVIL ENGINEERING	04.02 ARCHITECTURE 14.04 ARCHITECTURAL ENGINEERING 14.08 CIVIL ENGINEERING 14.0803 STRUCTURAL ENGINEERING 14.0805 WATER RESOURCES ENGINEERING 14.14 ENVIRONMENTAL/ENVIRONMENTAL HEALTH ENGINEERING	MATHEMATICAL SCIENCES	
106 ELECTRICAL ENGINEERING	14.09 COMPUTER ENGINEERING 14.10 ELECTRICAL, ELECTRONICS, AND COMMUNICATIONS ENGR.	402 MATHEMATICS AND APPLIED MATHEMATICS	27.01 MATHEMATICS 27.03 APPLIED MATHEMATICS 27.0302 OPERATIONS RESEARCH 27.99 MATHEMATICS, OTHER 30.08 MATHEMATICS AND COMPUTER SCIENCE
107 ENGINEERING SCIENCE AND ENGINEERING PHYSICS	14.12 ENGINEERING PHYSICS 14.13 ENGINEERING SCIENCE	403 STATISTICS	27.05 MATHEMATICAL STATISTICS 52.0802 ACTUARIAL SCIENCE
108 INDUSTRIAL/MANUFACTURING ENGINEERING	14.17 INDUSTRIAL/MANUFACTURING ENGINEERING 14.27 SYSTEMS ENGINEERING 14.30 ENGINEERING/INDUSTRIAL MANAGEMENT 30.06 SYSTEMS SCIENCE	COMPUTER SCIENCE	
109 MECHANICAL ENGINEERING	14.11 ENGINEERING MECHANICS 14.19 MECHANICAL ENGINEERING	401 COMPUTER SCIENCE	11.01 COMPUTER AND INFORMATION SCIENCES, GENERAL 11.04 INFORMATION SCIENCES AND SYSTEMS 11.07 COMPUTER SCIENCE 52.1201 MANAGEMENT INFORMATION SYSTEMS 52.1301 MANAGEMENT SCIENCE
110 METALLURGICAL AND MATERIALS ENGINEERING	14.06 CERAMIC SCIENCES AND ENGINEERING 14.18 MATERIALS ENGINEERING 14.20 METALLURGICAL ENGINEERING 14.28 TEXTILE SCIENCES AND ENGINEERING 14.31 MATERIALS SCIENCE 40.0701 METALLURGY	AGRICULTURAL SCIENCES (SEE ALSO 102 AND 901)	
111 MINING ENGINEERING	14.15 GEOLOGICAL ENGINEERING 14.16 GEOPHYSICAL ENGINEERING 14.21 MINING AND MINERAL ENGINEERING	501 AGRICULTURAL SCIENCES	02.01 AGRICULTURE/AGRICULTURAL SCIENCES 02.02 ANIMAL SCIENCES 02.03 FOOD SCIENCES 02.04 PLANT SCIENCES 02.05 SOIL SCIENCES 02.99 AGRICULTURAL SCIENCES, OTHER 03.01 NATURAL RESOURCES CONSERVATION 03.02 CONSERVATION AND REGULATION 03.03 FISHING AND FISHERIES SCIENCES AND MANAGEMENT 03.05 FORESTRY AND RELATED SCIENCES 03.06 WILDLIFE AND WILDLANDS MANAGEMENT 03.99 CONSERVATION AND RENEWABLE NATURAL RESOURCES, OTHER
112 NUCLEAR ENGINEERING	14.23 NUCLEAR ENGINEERING	BIOLOGICAL SCIENCES	
113 PETROLEUM ENGINEERING	14.25 PETROLEUM ENGINEERING	601 ANATOMY	26.0601 ANATOMY 51.1301 MEDICAL ANATOMY
114 ENGINEERING, N.E.C.	14.01 ENGINEERING, GENERAL 14.22 NAVAL ARCHITECTURE AND MARINE ENGINEERING 14.24 OCEAN ENGINEERING 14.29 ENGINEERING DESIGN 14.99 ENGINEERING, OTHER	602 BIOCHEMISTRY	26.0202 BIOCHEMISTRY 51.1302 MEDICAL BIOCHEMISTRY
PHYSICAL SCIENCES		603 BIOLOGY	26.01 BILOGY, GENERAL
201 ASTRONOMY	40.02 ASTRONOMY 40.03 ASTROPHYSICS	604 BIOMETRY AND EPIDEMIOLOGY	26.0614 BIOMETRICS 26.0615 BIOSTATISTICS 51.1303 MEDICAL BIOMATHMATICS AND BIOMETRICS 51.2203 EPIDEMIOLOGY
202 CHEMISTRY	40.05 CHEMISTRY (SEE ALSO 602) 40.0507 POLYMER CHEMISTRY	605 BIOPHYSICS	26.0203 BIOPHYSICS 51.1304 MEDICAL BIOPHYSICS/PHYSICS
203 PHYSICS	40.08 PHYSICS (SEE ALSO 605) 40.0807 OPTICS 40.0809 ACOUSTICS	606 BOTANY	26.03 BOTANY (EXCLUDING 26.05 MICROBIOLOGY/BACTERIOLOGY—SEE 611) 26.0305 PLANT PATHOLOGY 26.0307 PLANT PHYSIOLOGY
204 PHYSICAL SCIENCES, N.E.C.	40.01 PHYSICAL SCIENCES, GENERAL 40.0799 MISCELLANEOUS PHYSICAL SCIENCES, OTHER 40.99 PHYSICAL SCIENCES, OTHER	607 CELL AND MOLECULAR BIOLOGY	26.04 CELL AND MOLECULAR BIOLOGY 26.0401 CELL BIOLOGY 26.0402 MOLECULAR BIOLOGY 51.1305 MEDICAL CELL BIOLOGY 51.1309 MEDICAL MOLECULAR BIOLOGY

608 ECOLOGY	908 SOCIOLOGY
26.0603 ECOLOGY	45.05 DEMOGRAPHY AND POPULATION STUDIES 45.11 SOCIOLOGY
609 ENTOMOLOGY AND PARASITOLOGY	909 SOCIOLOGY/ANTHROPOLOGY
26.0610 PARASITOLOGY	
26.0702 ENTOMOLOGY	
610 GENETICS	910 SOCIAL SCIENCES, N.E.C.
26.0613 GENETICS, PLANT AND ANIMAL	04.03 CITY/URBAN, COMMUNITY, AND REGIONAL PLANNING 04.07 ARCHITECTURAL URBAN DESIGN AND PLANNING 05 AREA, ETHNIC, AND CULTURAL STUDIES 30.11 GERONTOLOGY 43.01 CRIMINAL JUSTICE AND CORRECTIONS 44.02 COMMUNITY ORGANIZATION, RESOURCES, AND SERVICES 45.01 SOCIAL SCIENCES, GENERAL 45.04 CRIMINOLOGY 45.12 URBAN AFFAIRS/STUDIES 45.99 SOCIAL SCIENCES, OTHER
26.0617 EVOLUTIONARY BIOLOGY	
51.1306 MEDICAL GENETICS	
611 MICROBIOLOGY, IMMUNOLOGY, AND VIROLOGY	HEALTH FIELDS (SEE ALSO 103)
26.05 MICROBIOLOGY/BACTERIOLOGY	
26.0618 BIOLOGICAL IMMUNOLOGY	701 ANESTHESIOLOGY 51.1604 NURSING ANESTHETIST (POST-R.N.)
26.0619 VIROLOGY	
51.1308 MEDICAL MICROBIOLOGY	
612 NUTRITION	702 CARDIOLOGY
19.05 FOODS AND NUTRITION STUDIES	
26.0609 NUTRITIONAL SCIENCES	703 ONCOLOGY/CANCER RESEARCH
51.1311 MEDICAL NUTRITION	
613 PATHOLOGY	704 ENDOCRINOLOGY
26.0704 PATHOLOGY, HUMAN AND ANIMAL	
51.1312 MEDICAL PATHOLOGY	705 GASTROENTEROLOGY
614 PHARMACOLOGY	706 HEMATOLOGY
26.0612 TOXICOLOGY	
26.0705 PHARMACOLOGY, HUMAN AND ANIMAL	707 NEUROLOGY 26.0608 NEUROSCIENCE
51.1314 MEDICAL TOXICOLOGY	
615 PHYSIOLOGY	708 OBSTetrics AND GYNECOLOGY
26.0706 PHYSIOLOGY, HUMAN AND ANIMAL	
51.1313 MEDICAL PHYSIOLOGY	709 OPHTHALMOLOGY 51.1701 OPTOMETRY (O.D.)
616 ZOOLOGY	710 OTORHINOLARYNGOLOGY
26.07 ZOOLOGY	
617 BIOSCIENCES, N.E.C.	711 PEDIATRICS
26.0616 BIOTECHNOLOGY RESEARCH	
26.0699 MISCELLANEOUS BIOLOGICAL SPECIALIZATIONS, OTHER	712 PREVENTIVE MEDICINE AND COMMUNITY HEALTH 51.22 PUBLIC HEALTH 51.2202 ENVIRONMENTAL HEALTH
26.99 BIOLOGICAL SCIENCES/LIFE SCIENCES, OTHER	
30.01 BIOLOGICAL AND PHYSICAL SCIENCES	713 PSYCHIATRY 51.1610 NURSING, PSYCHIATRY/MENTAL HEALTH (POST-R.N.)
30.10 BIOPSYCHOLOGY	
PSYCHOLOGY	714 PULMONARY DISEASE
801 PSYCHOLOGY, COMBINED	
42.01 PSYCHOLOGY, GENERAL	715 RADIOLOGY 26.0611 RADIATION BIOLOGY/RADIOBIOLOGY
802 PSYCHOLOGY, EXCEPT CLINICAL	
42.03 COGNITIVE PSYCHOLOGY AND PSYCHOLINGUISTICS	716 SURGERY
42.04 COMMUNITY PSYCHOLOGY	
42.07 DEVELOPMENTAL AND CHILD PSYCHOLOGY	717 CLINICAL MEDICINE, N.E.C.
42.08 EXPERIMENTAL PSYCHOLOGY	
42.09 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY	51.1399 MEDICAL BASIC SCIENCES, OTHER 51.1201 MEDICINE (M.D.) 51.14 MEDICAL CLINICAL SCIENCES (M.S., Ph.D.) 51.19 OSTEOPATHIC MEDICINE (D.O.) 51.21 PODIATRY (D.P.M., D.P., Pod.D.)
42.11 PHYSIOLOGICAL PSYCHOLOGY/PSYCHOBIOLOGY	
42.16 SOCIAL PSYCHOLOGY	
42.17 SCHOOL PSYCHOLOGY	718 DENTAL SCIENCES
42.99 PSYCHOLOGY, OTHER	
51.2301 ART THERAPY	51.04 DENTISTRY (D.D.S., D.M.D.) 51.05 DENTAL CLINICAL SCIENCES/GRAD. DENTISTRY (M.S., Ph.D.)
51.2303 HYPNOTHERAPY	
51.2705 PSYCHOANALYSIS	
803 CLINICAL PSYCHOLOGY	719 NURSING
42.02 CLINICAL PSYCHOLOGY	
SOCIAL SCIENCES	51.16 NURSING (EXCLUDING 51.1610, NURSING, PSYCHIATRY/MENTAL HEALTH—SEE 713, AND 51.1604 NURSING ANESTHETIST— SEE 701)
901 AGRICULTURAL ECONOMICS	720 PHARMACEUTICAL SCIENCES
01.0101 AGRICULTURAL BUSINESS AND MANAGEMENT, GENERAL	
01.0102 AGRICULTURAL BUSINESS/AGRICULTURE OPERATIONS	
01.0103 AGRICULTURAL ECONOMICS	
902 ANTHROPOLOGY (CULTURAL AND SOCIAL)	721 VETERINARY SCIENCES
45.02 ANTHROPOLOGY	
45.03 ARCHAEOLOGY	51.24 VETERINARY MEDICINE (D.V.M.) 51.25 VETERINARY CLINICAL SCIENCES (M.S., Ph.D.)
903 ECONOMICS	722 HEALTH-RELATED, N.E.C.
45.06 ECONOMICS	
52.06 BUSINESS/MANAGERIAL ECONOMICS	31.0505 EXERCISE SCIENCE/PHYSIOLOGY AND MOVEMENT STUDIES 51.2306 OCCUPATIONAL THERAPY 51.2308 PHYSICAL THERAPY 51.2399 REHABILITATION/therAPEUTIC SERVICES, OTHER 51.2704 NATUROPATHIC MEDICINE 51.99 HEALTH PROFESSIONS AND RELATED SCIENCES, OTHER
904 GEOGRAPHY	
45.0701 GEOGRAPHY	
45.0702 CARTOGRAPHY	
905 HISTORY AND PHILOSOPHY OF SCIENCE	723 COMMUNICATION DISORDERS SCIENCES
45.0804 HISTORY AND PHILOSOPHY OF SCIENCE	
906 LINGUISTICS	51.02 COMMUNICATION DISORDERS SCIENCES AND SERVICES 51.0201 COMMUNICATION DISORDERS, GENERAL 51.0202 AUDIOLOGY/HEARING SCIENCES 51.0203 SPEECH-LANGUAGE PATHOLOGY 51.0204 SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY
16.0102 LINGUISTICS	
907 POLITICAL SCIENCE/PUBLIC ADMINISTRATION	
44.04 PUBLIC ADMINISTRATION	
44.05 PUBLIC POLICY ANALYSIS	
44.99 PUBLIC ADMINISTRATION AND SERVICES, OTHER	
45.09 INTERNATIONAL RELATIONS AND AFFAIRS	
45.10 POLITICAL SCIENCE AND GOVERNMENT	

**LIST OF DOCTORATE-GRANTING AND MASTER'S-
GRANTING INSTITUTIONS**

Technical Table II-1. Doctorate-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school			FICE code	State, institution, and school			
	Alabama				California, continued			
001002	H L Alabama A&M University				School of Medicine			
008695	L Auburn University			001319	L University of Calif at San Francisco			
	Graduate School (Main Campus)			001320	L University of Calif at Santa Barbara			
	Graduate School at Montgomery			001321	L University of Calif at Santa Cruz			
001052	University of Alabama at Birmingham, The			001314	L University of California, Irvine			
	Graduate School				College of Medicine			
	School of Medicine				Graduate School			
001055	University of Alabama in Huntsville, The			001315	L University of California, Los Angeles			
001051	University of Alabama, The				Graduate School			
001057	University of South Alabama				School of Medicine			
	College of Medicine			001216	University of La Verne			
	Graduate School			010395	University of San Diego			
				001328	University of Southern California			
	Alaska				Graduate School			
029094	L University of Alaska Fairbanks			001329	School of Medicine			
				008846	University of the Pacific			
	Arizona				Wright Institute, The			
	Colorado							
001081	Arizona State University			001348	Colorado School of Mines			
001082	Northern Arizona University			001350	L Colorado State University			
001083	L University of Arizona			008717	University of Colorado			
	College of Medicine				Graduate School at Boulder			
	Graduate School				Graduate School at Colorado Springs			
	Arkansas				Graduate School at Denver			
					Health Sciences Center			
001109	University of Arkansas - Med Sci Campus			001371	University of Denver			
001108	L University of Arkansas Main			001349	University of Northern Colorado			
	California				Connecticut			
001122	Biola University			001416	University of Bridgeport			
009844	Cal Schl of Prof Psych Berkeley/Alameda			008718	University of Connecticut			
011881	Calif Sch of Prof Psych - Fresno				Graduate School			
010013	Calif Sch of Prof Psych - Los Angeles				Health Center			
011117	Calif Sch of Prof Psych - San Diego			001422	University of Hartford			
012154	California Institute of Integral Studies			001424	Wesleyan University			
001131	California Institute of Technology			001426	Yale University			
001139	California State University, Long Beach				Graduate School			
000166	Charles R. Drew Univ of Medicine & Sci				School of Medicine			
001169	Claremont Graduate School				School of Nursing			
029092	Fielding Institute, The				Delaware			
001200	Fuller Theological Seminary							
001205	Golden Gate University							
001218	Loma Linda University			001431	L University of Delaware			
	Graduate School				District of Columbia			
029225	Pacific Graduate School of Psychology							
001264	Pepperdine University			001434	American University			
010441	RAND Graduate School of Policy Studies			001437	Catholic University of America			
001151	San Diego State University			001444	George Washington University			
001326	Santa Clara University				Graduate School			
001305	Stanford University				School of Medicine and Health Sciences			
	Graduate School			001445	Georgetown University			
	School of Medicine				Graduate School			
001158	US International University				School of Medicine			
001310	US Naval Postgraduate School			001448 H	Howard University			
001312	L University of Calif at Berkeley				College of Medicine			
001313	L University of Calif at Davis				Graduate School			
001316	L University of Calif at Riverside							
001317	L University of Calif at San Diego							
	Graduate School							

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Technical Table II-1. Doctorate-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school			FICE code	State, institution, and school		
	Florida				Illinois, continued		
001480	H	L	Florida A&M University Florida Atlantic University Florida Institute of Technology Florida International University			009800	Rush University
001481						001758	Southern Illinois Univ at Carbondale
001469						001775	L Univ of Illinois at Urbana-Champaign
009635						001774	University of Chicago Graduate School
001489	L		Florida State University Nova Southeastern University				
001509						001776	L University of Illinois at Chicago
003954							
001535	L		University of Florida College of Medicine College of Nursing Graduate School				Indiana
						001786	Ball State University
001536			University of Miami Graduate School School of Medicine			001807	Indiana State University
						008731	Indiana University Graduate School-Bloomington
001537			University of South Florida College of Medicine Graduate School				Indiana Univ-Purdue Univ at Fort Wayne
							Indiana University-Purdue University
							School of Dentistry
							School of Medicine
	Georgia			008732	L	Purdue University Graduate School	
001559	H		Clark Atlanta University Emory University Graduate School School of Medicine			001840	Purdue University Calumet University of Notre Dame
001564							
							Iowa
008723			Georgia Institute of Technology			001869	L Iowa State University
001574			Georgia State University			011113	Maharishi University of Management
005010			Institute of Paper Science & Technology			001855	Univ of Osteopathic Med & Health Sci
001579			Medical College of Georgia			001892	University of Iowa College of Medicine
008724			Mercer University Graduate School School of Medicine			001890	Graduate School
							University of Northern Iowa
029297	H		Morehouse School of Medicine				
001598	L		University of Georgia				Kansas
	Hawaii			001928	L	Kansas State University	
001610	L		University of Hawaii at Manoa Graduate School John A. Burns School of Medicine			029001	University of Kansas Graduate School Medical Center
						001950	Wichita State University
	Idaho				Kentucky		
001620			Idaho State University			001960	Spalding University
001626	L		University of Idaho			008744	L University of Kentucky College of Medicine
							Graduate School
						001999	University of Louisville Graduate School
							School of Medicine
029230			Chicago School of Prof Psych				
001671			DePaul University				
001659			Finch U of Hlth Sci/The Chicago Med Sch				
001691			Illinois Institute of Technology				
001692			Illinois State University				
001710			Loyola University of Chicago Graduate School Graduate School at the Medical Center Stritch School of Medicine			008745	L Louisiana State University Medical Center at New Orleans
							School of Medicine in Shreveport
							The Graduate School in Baton Rouge
							University of New Orleans
001657			Midwestern University				
001737			Northern Illinois University			002008	Louisiana Tech University
001739			Northwestern University Graduate School Medical School			002020	Northeast Louisiana University
						002029	Tulane University Graduate School

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Technical Table II-1. Doctorate-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school		FICE code	State, institution, and school	
	Louisiana, continued			Michigan, continued	
002031	School of Medicine	002290	L	Michigan State University	
	School of Public Health & Tropical Med	002292		Michigan Technological University	
002032	H University of Southwestern Louisiana	002307		Oakland University	
	Xavier University of Louisiana	002323		University of Detroit Mercy	
		009091		University of Michigan	
	Maine			Graduate School at Ann Arbor	
002053	L University of Maine	002329		Graduate School at Dearborn	
002050	University of New England			Medical School at Ann Arbor	
	College of Health Professions			Wayne State University	
	College of Osteopathic Medicine	002330		Graduate School	
				School of Medicine	
	Maryland			Western Michigan University	
				Minnesota	
002077	Johns Hopkins University	010337	L	Mayo Graduate School	
	Graduate School	008761		University of Minnesota	
	School of Hygiene and Public Health			Duluth School of Medicine	
	School of Medicine			Graduate School at Duluth	
002078	Loyola College			Graduate School at Minneapolis	
029169	Uniformed Serv Univ of the Hlth Sciences			Minneapolis Medical School	
002105	L Univ of Maryland - Baltimore County	025042		Walden University	
002103	L University of Maryland - College Park				
002106	H University of Maryland Eastern Shore			Mississippi	
002104	L University of Maryland at Baltimore				
	Massachusetts		002410	H L	Jackson State University
002114	American International College	002423		Mississippi State University	
002128	Boston College	008764		University of Mississippi	
002130	Boston University		002441	Graduate School	
	Graduate School			School of Medicine	
	School of Dentistry				
	School of Medicine			University of Southern Mississippi	
	School of Public Health				
002133	Brandeis University	029239		Missouri	
002139	Clark University	002477		Forest Institute of Professional Psych	
002146	Emerson College	008766		Kirksville College of Osteopathic Med	
002155	Harvard University			Saint Louis University	
	Graduate School of Arts & Sciences	002474		Graduate School	
	Harvard Medical School	002516	L	School of Medicine	
	School of Public Health			University of Health Sciences, The	
002165	Mass College of Pharmacy/Allied Health			University of Missouri-Columbia	
002178	L Massachusetts Institute of Technology	002518		Graduate School	
002199	Northeastern University	002517	L	School of Medicine	
002209	Smith College	002519	L	University of Missouri-Kansas City	
002219	Tufts University	002520	L	University of Missouri-Rolla	
	Graduate School			University of Missouri-St. Louis	
	Sackler Sch of Grad Biomedical Sciences			Washington University	
	School of Medicine			Graduate School	
	School of Nutrition			School of Medicine	
008755	L University of Massachusetts			Montana	
	Univ of Massachusetts at Amherst		002532	L	Montana State University-Bozeman
	Univ of Massachusetts at Worcester		002536		University of Montana
002161	University of Massachusetts Boston				
002230	University of Massachusetts Lowell			Nebraska	
002233	Woods Hole Oceanographic Institution				
	Worcester Polytechnic Institute		002542		Creighton University
					Graduate School
	Michigan				School of Medicine
002238	Andrews University	002565			
002243	Central Michigan University	002554	L	University of Nebraska - Lincoln	
					University of Nebraska - Omaha

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Technical Table II-1. Doctorate-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school	FICE code	State, institution, and school
Nebraska, continued			
006895	University of Nebraska Medical Center		
Nevada			
002569	University of Nevada at Las Vegas	002780	Brooklyn Center
002568	L University of Nevada, Reno Graduate School School of Medical Sciences	008782	C. W. Post Center Rockland Campus Westchester Center
		002784	New School University New York Institute of Technology Graduate School New York College of Osteopathic Med
			New York Medical College Graduate School of Health Sciences
002573	Dartmouth College Graduate School School of Medicine	002785	New York University Graduate School School of Medicine
002589	L University of New Hampshire	008784	Wagner Graduate School of Public Service
		002796	Pace University Polytechnic University
008770	Fairleigh Dickinson University Florham-Madison Campus Teaneck-Hackensack Campus	002803	Rensselaer Polytechnic Institute Rochester Institute of Technology SUNY Health Science Center at Syracuse
002621	New Jersey Institute of Technology	002806	SUNY College of Env Science and Forestry
002627	Princeton University	002840	SUNY College of Optometry
008771	L Rutgers the State Univ of New Jersey Graduate School at Camden Graduate School at New Brunswick Graduate School at Newark School of Criminal Justice	002851	SUNY Health Science Center at Brooklyn SUNY at Albany SUNY at Binghamton SUNY at Buffalo Graduate School School of Medicine
002632	Seton Hall University	009555	SUNY at Stony Brook
002639	Stevens Institute of Technology		Graduate School
002620	Univ of Med and Dentistry of New Jersey Grad Sch of Biomed Sci/NJ Med School New Jersey Medical School at Newark New Jersey School of Osteopathic Med Robert Wood Johnson Medical School	002823	School of Medicine
		008789	Saint John's University
		003979	Syracuse University
		002807	Teachers College, Columbia University
		002889	The Rockefeller University
		002894	Union College
			University of Rochester Graduate School
002654	New Mexico Institute of Mining and Tech		School of Medicine and Dentistry
008773	L New Mexico State University	002903	Yeshiva University
002663	University of New Mexico Graduate School School of Medicine		Albert Einstein College of Medicine Graduate School
New Mexico			
New York			
002666	Adelphi University	002920	Duke University
002887	Albany Medical College		Graduate School
008775	Alfred University	002923	School of Medicine
004063	CUNY Graduate School and Univ Center		East Carolina University
007022	CUNY Herbert H. Lehman College		Graduate School
002689	CUNY Hunter College	002972	School of Medicine
007026	CUNY Mt. Sinai School of Medicine	002974	L North Carolina State University
002699	Clarkson University		Univ of North Carolina at Chapel Hill
002707	Columbia Univ in the City of New York		Graduate School
008779	L Cornell University Graduate School Graduate School of Medical Sciences Medical College	002976	School of Medicine
		002978	Univ of North Carolina at Greensboro Wake Forest University Graduate School School of Medicine
002722	Fordham University		
002732	Hofstra University		
008780	Long Island University Brentwood Center		
		009266	L North Dakota State University
North Carolina			
North Dakota			

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Technical Table II-1. Doctorate-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school	FICE code	State, institution, and school	
North Dakota, continued				
008794	University of North Dakota	003327	Slippery Rock University of Pennsylvania	
Ohio				
003309	Air Force Institute of Technology	003371	Temple University	
008795	Antioch University	003278	Graduate School	
008796	Bowling Green State University	003378	School of Medicine	
003024	Case Western Reserve University		School of Pharmacy	
	Graduate School		Thomas Jefferson University	
	School of Medicine		University of Pennsylvania	
003032	Cleveland State University	008815	Graduate School	
008799	Kent State University		School of Medicine	
007737	Medical College of Ohio	003388	Villanova University	
008800	Miami University (OH)	029291	Widener University	
008802	L Ohio State University		Rhode Island	
	College of Medicine & Public Health			
	Graduate School			
008803	Ohio University	003401	Brown University	
010923	Union Institute	003414	L University of Rhode Island	
012310	University of Akron		South Carolina	
008805	University of Cincinnati			
	College of Medicine	003425	L Clemson University	
	Graduate School	003438	Medical University of South Carolina	
003127	University of Dayton	008819	University of South Carolina	
003131	University of Toledo		Graduate School	
009167	Wright State University		Medical School	
Oklahoma				
008806	L Oklahoma State University		South Dakota	
008807	University of Oklahoma	003470	South Dakota School of Mines and Tech	
	Graduate College	003471	L South Dakota State University	
	Health Sciences Center	003474	University of South Dakota	
003185	University of Tulsa		Graduate School	
			School of Medicine	
Oregon				
008856	Oregon Grad Inst of Science & Technology		Tennessee	
004882	Oregon Health Sciences University	003487	East Tennessee State University	
003210	L Oregon State University	003506 H	Meharry Medical College	
003212	Pacific University	003510	Middle Tennessee State University	
003216	Portland State University	003522 H	L Tennessee State University	
003223	University of Oregon	003523	Tennessee Technological University	
		003509	University of Memphis	
Pennsylvania				
003271	Allegheny University of Health Sciences	003530	L University of Tennessee at Knoxville	
003237	Bryn Mawr College	006725	L University of Tennessee, Memphis	
003242	Carnegie Mellon University	003535	Vanderbilt University	
003256	Drexel University		Graduate School	
003258	Duquesne University		School of Medicine	
	Bayer School of Nat. & Env. Sciences		Texas	
	Grad School of Liberal Arts & Sciences	004948	Baylor College of Dentistry	
	Graduate School of Pharmecuetical Sci	004949	Baylor College of Medicine	
	School of Nursing	003545	Baylor University	
008810	Indiana University of Pennsylvania	003581	Lamar University	
003289	Lehigh University	003604	Rice University	
008813	L Pennsylvania State University	003606	Sam Houston State University	
	College of Medicine	003613	Southern Methodist University	
	Graduate School	003615	Southwest Texas State University	
003352	Philadelphia Col of Osteopathic Med	003624	Stephen F. Austin State University	
003353	Philadelphia Coll of Pharmacy and Sci	003632	L Texas A&M University	

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FICE code	State, institution, and school		FICE code	State, institution, and school	
	Texas, continued			West Virginia, continued	
003565	Texas A&M University-Commerce		011245	School of Medicine	
003639	Texas A&M University-Kingsville		003827	West Virginia School of Osteopathic Med	
003636	Texas Christian University		L	West Virginia University	
003644	Texas Tech University Graduate School Health Science Center				Wisconsin
003646	Texas Woman's University	003863	Marquette University		
009768	U of North TX Hlth Sci Ctr at Ft Worth	008296	Medical College of Wisconsin		
003659	Univ of Texas Hlth Sci Ctr San Antonio	003895	L	University of Wisconsin-Madison Graduate School	
011618	Univ of Texas Hlth Sci Ctr at Houston			Medical School	
003657	Univ of Texas M.D. Anderson Cancer Ctr	003896		University of Wisconsin-Milwaukee	
004952	Univ of Texas Med Branch at Galveston				
003660	Univ of Texas SW Medical Ctr at Dallas				
003652	University of Houston				Wyoming
003594	University of North Texas				
003656	University of Texas at Arlington	003932	L	University of Wyoming	
003658	University of Texas at Austin				
009741	University of Texas at Dallas				Puerto Rico
003661	University of Texas at El Paso				
	Utah		010724	Caribbean Center for Advanced Studies	
			029268	Ponce School of Medicine	
012305	Brigham Young University	003944	L	The Pontifical Cath Univ of Puerto Rico	
003675	University of Utah Graduate School School of Medicine	007108	L	Univ of Puerto Rico Mayaguez Campus	
003677	L Utah State University	003945	L	Univ of Puerto Rico Rio Piedras Campus	
	Vermont				
003696	L University of Vermont College of Medicine Graduate School				
	Virginia				
008828	College of William and Mary				
010338	Eastern Virginia Medical School				
003749	George Mason University				
003714	H Hampton University				
003717	Institute of Textile Technology				
003721	James Madison University				
003728	Old Dominion University				
003745	University of Virginia Graduate School School of Medicine				
003735	Virginia Commonwealth University Graduate School Medical College of Virginia				
003754	L Virginia Polytechnic Inst and State Univ				
	Washington				
003798	University of Washington Graduate School School of Medicine				
		School of Public Health and Comm Med			
003800	L Washington State University				
	West Virginia				
003815	Marshall University Graduate School				
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Technical Table II-2. Master's-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school			FICE code	State, institution, and school		
	Alabama				Connecticut, continued		
001005	H	Alabama State University		001380	Western Connecticut State University		
001020		Jacksonville State University					
001049		Troy State University in Montgomery					Delaware
001050	H	Tuskegee University					
001004		University of Montevallo		001428 H L	Delaware State University		
	Alaska				District of Columbia		
029095		University of Alaska Anchorage		001443	Gallaudet University		
029096		University of Alaska Southeast		029100 H L	University of the District of Columbia		
	Arkansas				Florida		
008701		Arkansas State University		001479	Embry-Riddle Aeronautical University		
001101		University of Arkansas at Little Rock		003955	University of West Florida		
001092		University of Central Arkansas					Georgia
	California			001552	Augusta State University		
001117		Azusa Pacific University		001602	Georgia College and State University		
001143		Calif Poly State Univ, San Luis Obispo		001572	Georgia Southern University		
001141		Calif State Univ at Dominguez Hills		001601	State University of West Georgia		
001137		Calif State Univ at Fullerton		001599	Valdosta State University		
001140		Calif State Univ at Los Angeles					Illinois
001150		Calif State University at Sacramento		001641	Bradley University		
001157		Calif State University, Stanislaus		001694	Chicago State University		
001144		California State Poly University, Pomona		001674	Eastern Illinois University		
007993		California State Univ - Bakersfield		009145	Governors State University		
001142		California State Univ, San Bernadino		001693	Northeastern Illinois University		
001146		California State University, Chico		001749	Roosevelt University		
001147		California State University, Fresno		001759	Southern Illinois Univ at Edwardsville		
001138		California State University, Hayward		001759	University of Illinois at Springfield		
001153		California State University, Northridge		009333	Western Illinois University		
001164		Chapman University		001780			Indiana
001196		Dominican College of San Rafael					
001171		Harvey Mudd College					
001149		Humboldt State University					
004484		John F Kennedy University					
011649		Loyola Marymount University		001788	Butler University		
011460		National University		001822	Indiana Wesleyan University		
001249		Occidental College		001830	Rose-Hulman Institute of Technology		
001257		Pacific States University		001795	University of Evansville		
001154		San Francisco State University		001832	University of Saint Francis		
001155		San Jose State University		001842	Valparaiso University		
001156		Sonoma State University					Iowa
001322		University of Redlands		001860	Drake University		
001325		University of San Francisco		001873	Loras College		
	Colorado			001876	Marycrest International Univ		
023562		National Technological University					Kansas
	Connecticut			001927	Emporia State University		
001378		Central Connecticut State University		001915	Fort Hays State University		
001379		Connecticut College		001926	Pittsburg State University		
001402		Quinnipiac College		001949	Washburn University of Topeka		
002804		Rensselaer at Hartford					Kentucky
001406		Southern Connecticut State University					
001409		St. Joseph College					
001414		Trinity College		001963	Eastern Kentucky University		
001397		University of New Haven		001976	Morehead State University		

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FICE code	State, institution, and school		FICE code	State, institution, and school	
	Kentucky, continued			Missouri, continued	
001977	Murray State University		002495	Truman State University	
002002	Western Kentucky University				Montana
	Louisiana		002531	Montana Tech of the Univ of Montana	
002006	H Grambling State University				Nebraska
002016	Loyola University New Orleans				
002017	McNeese State University				
002005	Nicholls State University		002551	University of Nebraska at Kearney	
002021	Northwestern State University				New Hampshire
002024	Southeastern Louisiana University				
002025	H L Southern University A & M, All Campuses		002586	Rivier College	
	Maryland			New Jersey	
002068	H Coppin State College				
002072	Frostburg State University		002642	College of New Jersey, The	
002076	Hood College		002622	Kean University	
002083	H Morgan State University		002616	Monmouth University	
002099	Towson University		002617	Montclair State University	
002102	University of Baltimore		002625	William Paterson U of NJ	
002108	Washington College				New Mexico
	Massachusetts		008772	Eastern New Mexico University	
002117	Anna Maria College		002653	New Mexico Highlands University	
002118	Assumption College				New York
002183	Bridgewater State College				
002185	Framingham State College				
029365	MGH Institute of Health Professions		004766	CUNY Bernard Baruch College	
002192	Mount Holyoke College		002687	CUNY Brooklyn College	
002188	Salem State College		002688	CUNY City College	
002210	University of Massachusetts Dartmouth		029040	CUNY College of Staten Island	
002226	Western New England College		002693	CUNY John Jay College of Crim Justice	
002229	Williams College		002690	CUNY Queens College	
002190	Worcester State College		002704	College of New Rochelle	
	Michigan		002705	College of St Rose	
			002710	Cooper Union	
			002737	Iona College	
002259	Eastern Michigan University		002739	Ithaca College	
002268	Grand Valley State University		002758	Manhattan College	
002301	Northern Michigan University		002765	Marist College	
	Minnesota		002788	Niagara University	
			008786	Russell Sage College	
			002841	SUNY College at Brockport	
002336	Bemidji State University		002842	SUNY College at Buffalo	
002360	Minnesota State University at Mankato		002844	SUNY College at Fredonia	
002367	Moorhead State University		002845	SUNY College at Geneseo	
002380	Saint Mary's University of Minnesota		002847	SUNY College at Oneonta	
002377	St. Cloud State University		002848	SUNY College at Oswego	
	Mississippi		002849	SUNY College at Plattsburgh	
			002850	SUNY College at Potsdam	
			006792	SUNY Inst of Technology at Utica-Rome	
002422	Mississippi University for Women		002846	SUNY at New Paltz	
	Missouri		002813	Sarah Lawrence College	
			002817	St. Bonaventure University	
002454	H L Central Missouri State University		002895	Vassar College	
002479	Lincoln University		002899	Wagner College	
002496	Northwest Missouri State University				North Carolina
002501	Southeast Missouri State University				
002503	Southwest Missouri State University		002906	Appalachian State University	

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Technical Table II-2. Master's-granting institutions in the fall 1998 NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering

FICE code	State, institution, and school			FICE code	State, institution, and school		
	North Carolina, continued				Texas, continued		
002905	H L	North Carolina A&T State University			003541	Angelo State University	
002950	H	North Carolina Central University			003592	Midwestern State University	
002975		Univ of North Carolina at Charlotte			003630 H L	Prairie View A&M University	
002984		University of North Carolina/Wilmington			003623	St. Mary's University	
002981		Western Carolina University			003625	Sul Ross State University	
	Ohio				003631	Tarleton State University	
003050		John Carroll University			011161	Texas A&M University-Corpus Christi	
003144		Xavier University			003642 H	Texas Southern University	
003145		Youngstown State University			003647	Trinity University	
	Oklahoma				011854	University of Central Texas	
003154		East Central University			013231	University of Houston - Victoria	
003161		Northeastern State University			011711	University of Houston Clear Lake	
003181		Southwestern Oklahoma State University			003578	University of Incarnate Word	
	Oregon				010115	University of Texas at San Antonio	
003219		Southern Oregon State College			029164	University of Texas at Tyler	
003224		University of Portland			009930	University of Texas of the Permian Basin	
	Pennsylvania				003599	University of Texas-Pan American	
003315		Bloomsburg University of Pennsylvania			003665	West Texas A&M University	
003238		Bucknell University				Vermont	
003316		California University of Pennsylvania			003686	Goddard College	
009234		Clarion University of Pennsylvania			003690	Marlboro College	
003320		East Stroudsburg Univ of Pennsylvania			003691	Middlebury College	
003321		Edinboro University of Pennsylvania				Virginia	
003266		Gannon University			003715	Hollins University	
003322		Kutztown University of Pennsylvania			003732	Radford University	
003324		Mansfield University of Pennsylvania			003744	University of Richmond	
003296		Marywood University			003764 H L	Virginia State University	
003325		Millersville University of Pennsylvania			003771	Washington	
003326		Shippensburg University of Pennsylvania			003775	Central Washington University	
003367		St Joseph's University			003778	Eastern Washington University	
003370		Swarthmore College			003785	Gonzaga University	
003384		University of Scranton			003794	Pacific Lutheran University	
003328		West Chester University of Pennsylvania			003790	Saint Martin's College	
003394		Wilkes University			003799	Seattle University	
	Rhode Island				003802	Walla Walla College	
003407		Rhode Island College			003804	Western Washington University	
	South Carolina				Whitworth College		
003428		College of Charleston				West Virginia	
003434		Furman University			003818	University of Charleston	
003456		Winthrop University			003825	West Virginia University Institute of Technology	
	Tennessee				Wisconsin		
003478		Austin Peay State University			003868	Milwaukee School of Engineering	
003490	H	Fisk University			003917	University of Wisconsin-Eau Claire	
003529	L	University of Tennessee at Chattanooga			003899	University of Wisconsin-Green Bay	
	Texas				003919	University of Wisconsin-La Crosse	
003537		Abilene Christian University			009630	University of Wisconsin-Oshkosh	
					003921	University of Wisconsin-Platteville	
					003923	University of Wisconsin-River Falls	
					003924	University of Wisconsin-Stevens Point	
					003915	University of Wisconsin-Stout	
					003926	University of Wisconsin-Whitewater	

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**Technical Table II-2. Master's-granting institutions in the fall 1998 NSF-NIH Survey of
Graduate Students and Postdoctorates in Science and Engineering**

FICE code	State, institution, and school	FICE code	State, institution, and school
Guam			
003935	University of Guam		

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